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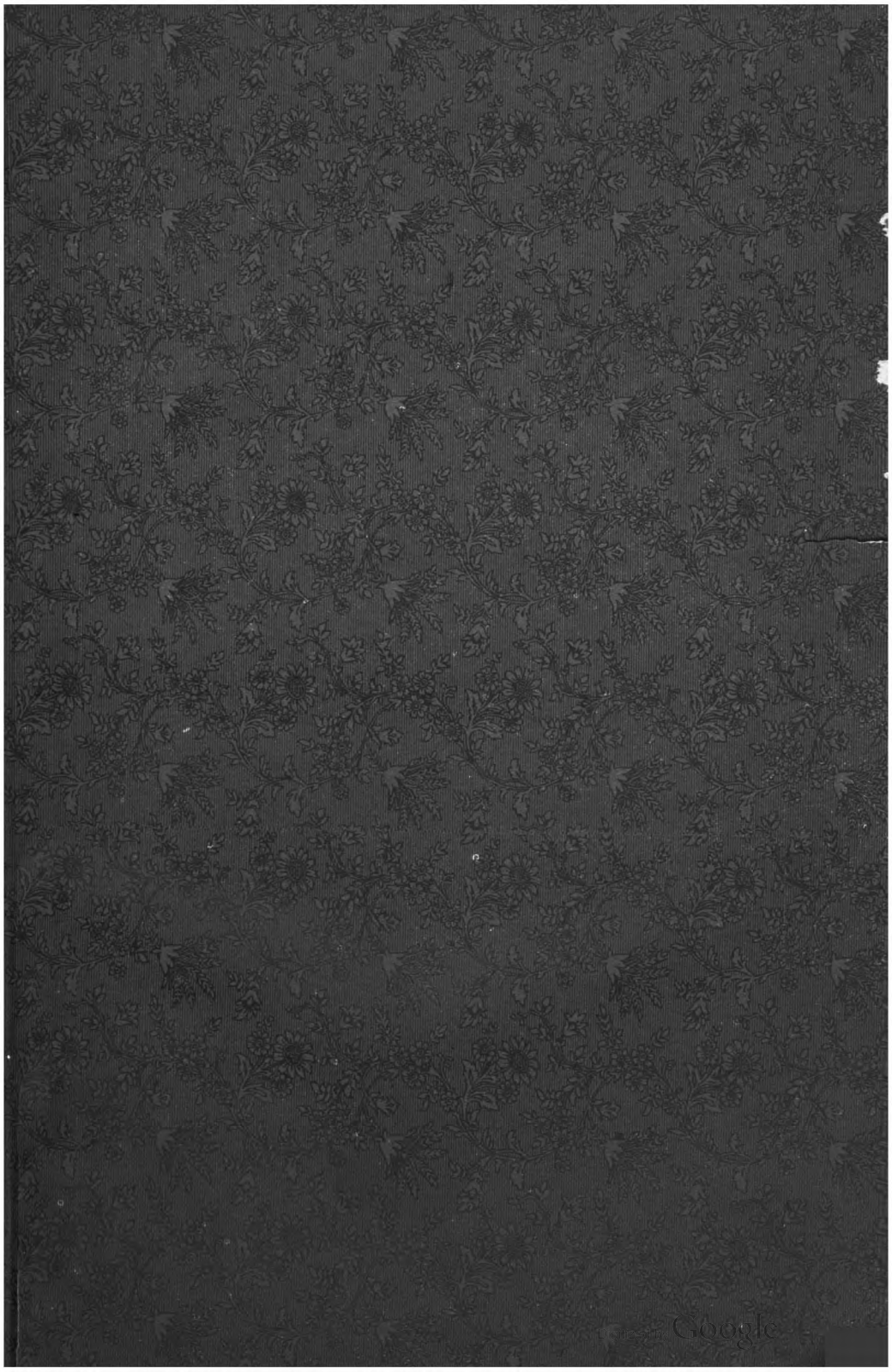
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THE  
FLORA OF CARDIFF,  
A DESCRIPTIVE LIST

OF THE  
INDIGENOUS PLANTS FOUND IN THE DISTRICT OF THE CARDIFF  
NATURALISTS' SOCIETY,  
WITH A  
LIST OF THE OTHER BRITISH AND EXOTIC SPECIES, FOUND ON  
CARDIFF BALLAST HILLS.

BY  
JOHN STORRIE,  
CURATOR, CARDIFF MUSEUM.

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PUBLISHED BY  
THE CARDIFF NATURALISTS' SOCIETY.

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## PREFACE.

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THIS is intended as a Hand-book to the indigenous plants found in the Eastern half of Glamorganshire, which forms the district of the Cardiff Naturalists' Society. The boundaries are thus described in their First Annual Report, 1868.

“The district we proposed to work in comprized an area of 530 square miles, bounded as follows :—On the South, by the Severn and Bristol Channel, from the mouth of the River Rumney to the mouth of the Ogmore. On the West, by following up the Ogmore to near Tondy, where it is joined by the Lynfi ; thence up the Lynfi to Blaen Lynfi, cross over the hill by Heol Fawr to Cymmer, in the Afon Valley, where it is joined by the Corrwg, thence up the Corrwg fawr, by the village of Glyn Corrwg and Blaen Corrwg farm to its source ; cross over the hill near to Carnfach, the highest ground in the county—1971 feet above sea level, and into the valley at the West end of Hirwain Common, to a junction with the boundary between the counties of Glamorgan and Brecon. For our North boundary follow this line past Hirwain, north of Cyfarthfa and Dowlais until we come to the River Rumney, near the Rhyd-y-Milwr, north of the Abergavenny and Merthyr turnpike road, and Rumney Bridge and gate. Then, for our Eastern boundary, follow down the River Rumney to its junction with the Severn.”

On only three occasions have I passed over these limits, a mile or so, and that for an interesting plant just outside the boundary line. The descriptions of the plants are compressed as much as possible, but it is believed they are clear enough to realize the real aim of the book ; which is, to enable an intelligent student to go out into the fields, and picking up any wild plant he may find in *perfect condition*, from



examination of its various parts, to be able to determine, with certainty, its English, Welsh, and Botanical name. It must be borne in mind that students ought not to attempt the naming of plants from fragments, or imperfect specimens. This can only be done by those who are familiar with the plant in its perfect state. In this Flora it is not intended to produce any original system of classification or arrangement. It is simply a compilation, in which I have endeavoured to use whatever may tend to forward the object before mentioned. As a catalogue of the plants of the district it is no doubt more or less imperfect, as it has been impossible for me to effectually hunt over the 530 square miles included in the district—there being many places likely to be the habitats of uncommon plants to which I have no access ; but no doubt search will be stimulated by the publication of this list, which (so far, as I am aware), is the only one published for the district ; and, should it ever be necessary to publish a supplement, all new discoveries will be placed to the credit of the discoverers.

This List of Plants was first prepared in May, 1876, as part of a project I then entertained of writing a series of papers to illustrate the natural history of the environs of Cardiff, of which only one paper was ever published—in the *Weekly Mail* of that date. The manuscript lay by me for a time, when it was utilized as a List of the Flora which I thought of communicating to the Botanical Exchange Club. I was, however, strongly urged to publish it as a pamphlet, but failing to obtain subscribers, and not caring to incur a considerable risk, where there was no chance of profit, I let the matter lie in abeyance, till this year when the Committee of the Cardiff Naturalists' Society generously undertook the risk of publishing an edition. The Welsh names are added at the urgent request of several Members of the Cardiff Naturalists' Society, and are mostly taken from "Richards' Dictionary, 1751"; "The British Language in its Lustre, 1777"; "Davies' Welsh Botanology, 1813"; *Physygwriaeth yr Hwsmon a'r Tylodion*, 1839"; and *Y Llysieu-Lyfr Teuluaidd*, 1858." I regret to say that very careful inquiries have failed to discover that more than a very small proportion of our indigenous plants are known in the district either by their Welsh or their English names.

Of the authorities above quoted, Dr. Davies is by far the most reliable, as he has quite exhausted the "Meddygon Myddfai," corrected their errors and re-cast everything that was known before his time. The Dictionary of Richards, of Llangrallo, is chiefly valuable as giving the Glamorganshire names.

Those who have mastered this Flora will find great and varied information imparted in the most delightful manner in the Floras of Withering, Hooker, and others, and in English Botany, that magnificent work of Sowerby and Boswell Syme, where no pains or cost have been spared to enhance the value of the information.



## BIBLIOGRAPHY OF THE DISTRICT.

TRIMEN'S BOTANICAL BIBLIOGRAPHY:—Glamorgan (41) province, S. Wales. Drained by small rivers flowing into the Bristol Channel. No complete flora.

*Polypodium vulgare*, v. *Cambricum*, in a wood near Denys Powis Castle, not far from Cardiff (now extinct). John Ray, 1690. Ray's specimen is still preserved in the British Museum of Natural History at South Kensington.

*Adiantum Capillis veneris*, in Barry Island and Port Kirig (Humphrey Llhyd). [Still grows abundantly in both habitats.—J. S.]

BOTANISTS' GUIDE THROUGH ENGLAND AND WALES. By Dawson Turner and Lewis Weston Dillwyn. London, 1805.

Page 298. *Alopecurus bulbosus*, Cardiff Marshes, Rev. J. Lightfoot.

*Rhamnus catharticus*, Flat Holmes, Dr. Turton. *Asparagus officinalis*, meadows between Cowbridge and the sea, Dr. Turton. *Saponaria officinalis*, plentifully between Cardiff and Llandaff, Dr. Turton. *Dianthus caryophyllus*, walls of Cardiff Castle, Dr. Turton.

*Sibthorpia Europæa*, near Pontypridd, Sir J. Callum. *Campanula hederacea*, moist places near Pontypridd, Sir J. Callum.

Page 753. *Gnaphalium Margaritaceum*, between Caerphilly and Quaker's Yard. *Equisetum sylveticum*, Quaker's Yard. *Carex lævigata*, near Quaker's Yard, Mr. E. Forster, Junr.

*Cnicus heterophyllus*, roadside between Llandaff and Cowbridge, Lewis Weston Dillwyn.

NEW BOTANISTS' GUIDE. By Hewitt Cottrell Watson. London, 1835. Vol. I.

Page 216. *Prunus padus*, Merthyr Tydfil. *Saxifraga hypnoides*, Glyn Corrgw. [Not been able to find it—J. S.]

R. Woods, in PHYTOLOGIST, says the *staticæ* of the district Rocks is *Dodartii*. *Orbanche Hedera*, at Sully. *Althea officinalis*, Barry Island. *Agrostis setacea*, Newton Down. *Gastridium lendigerum*, Penarth. *Atriplex Babingtonii*, Sully and Barry. *Nepeta Cataria*, Caerphilly. *Empetrum nigrum*, St. Lythans. [Not able to find it—J. S.] *Mentha rotundifolia*, Taff's Well. *Veronica Buxbaumii*, Lavernock. *Inula Helenium*, Sully. *Galium tricornu*, Barry. *Oenothera biennis*, Barry. *Hypericum dubium*, *Melilotus arvensis*, Sully.

J. W. G. Gutch, in PHYTOLOGIST, Vol. I., p. 104, says—*Atropa Belladonna*, Mr. Dillwyn records it from Llandaff [Last found in 1873—J. S.], and *Lastrea thelypteris*, Bogs. [I have not found this in district.—J. S.]

Westcombe, in PHYTOLOGIST, Vol. I., p. 780, says—*Cnicus tuberosus*, between St. Donat's and Dunraven. [Does this still exist? I failed to find it.—J. S.]

J. W. G. Gutch, in PHYTOLOGIST, Vol. III., says—*Rubus saxatilis*, near Glyn Corrgw. *Rosa Systyla*, *Surculosa* and *tomentosa* are found near Bridgend.

MISS Ollivant in the Proceedings of the Cardiff Naturalists' Society gives a list, and Mrs. Traherne follows.

In a flora of Glamorgan it would be strange if a notice of the writings of Iolo Morganwg was omitted. Iolo, whose poems have the genuine ring of true poetry, and will survive, has been rather unfortunate in dealing with the Botany of the district, as many of the following quotations from his works will show.

Speaking of Glamorganshire, he writes :—Page 228. Spindle tree (*Euonymus Europæus*) in the lowland and middle region frequent ; more beautiful in flower and fruit than useful as a fence. This is called in Welsh, “Y pren y crogodd D—l ei fam,” that is, “The tree whereon the Devil hanged his mother.”

Page 231. Bullace tree (*Prunus insititia*), most common on the rag lias limestone of the Vale of Glamorgan, but found frequently on other soils. They form a good hedge. There are several varieties, as black, red, white, &c.; their fruit generally ripening in October and November, when their taste is by some called a “pleasant sub-acid.” A large kind of black bullace, or wild plum, called Cwm-kiddy Crake is found indigenous in the woods and hedges of Cwm-kiddy Vale, in the parishes of Barry and Porthkerry on the flag lias limestone; the fruit ripens in November, and will continue on the trees, in perfection, till Candlemas. It is a pleasant fruit, and the more so as it comes in a season when no other fruit remains unpreserved. [Quite erroneous.—J. S.]

Red Crake (*Empetrum rubrum*), on the grey lias limestone, in hedges, in the parishes of Llancarvan, Flimston, Eyllys Brewis, Lantwit Major, &c. The fruit is larger than that of wild plums in general, and might more appropriately be called a wild apricot. Its leaves are heart-shaped, has no spines, is a poor bearer; otherwise it would be worth cultivation in fruit gardens. It grows thick as a hedge shrub. [No such plant ever existed.—J. S.]

Buckthorn (*Rhamnus catharticus*), in several places, but most commonly found on the blue and grey lias limestones. It grows to a large size when cultivated in orchards, &c. Its fruit is well known as a medicine.

Service or Sorb-Apple (*Sorbus domestica*), on the sea cliffs of the lias tract, at Roose, Barry, Cadoxton, &c., and in a few cases more inland. Fruit yellowish brown, like a small pear.

Page 232. Wild service tree (*Crataegus torminalis*), on limestone in Glamorganshire.

Bastard or dwarf service tree (*Sorbus hybrida*), on the sea cliffs, at Font-y-gary, &c., in Glamorganshire. [No.—J. S.]

Bird Cherry (*Prunus padus*) in upland woods and hedges. In mountain valleys several roods of this shrub are found without any intermixture.

White Beam Tree (*Pyrus Aria*), in Gower, Pont Nedd Vechan, and in a few other places in Glamorganshire. *Scarce*.

Butchers' Broom (*Ruscus Aculeatus*), in several places on the upland coal and slate tracts. Cultivated in the gardens of the vales, as an ornamental shrub.

Broom (*Spartium scoparium*), on dry upland soils, most frequent, where it commonly forms a most inefficient part of fences. Its great use is for cottage besoms and thatching. Some brewers use it as a bitter, and old women prescribe its infusion in cases of dropsy. It is vulgarly supposed to indicate fertility. “Mae aur tan y banadl,” says the Welsh proverb; that is, “There is gold under the broom.” In its favourite situations it grows to a large size, so as to girt a foot or 13 inches.

*Ulex Europæus*, the furze of the South of England, the whin of the Eastern, and the gorse of the Northern Counties. The Welsh in their general vocabulary have adopted the latter term. In their own language they distinguish two varieties:—1, Eithin Ffreinig, French gorse, or Eithin y fro, vale gorse, the great upright *Ulex* flowering with the broom in May; and 2, Eithin y Mynydd, mountain gorse, the lesser procumbent gorse flowering with the heath in Autumn.

Page 239. The *Genista Anglica*, Needle furze, or petty whin, is, by the Welsh, ranked among furze, and called Eithin y gath, or cat gorse; and Eithin y ieir, or pen gorse.

Spurge Laurel (*Daphne laureola*), on the strong loam of the lias limestone district.

Spurge Olive (*Daphne Mezereon*), scarce, but said to be found in a few places about St. Fagan's, Fairwater, &c.

Raspberry, in the mountain valleys abundantly.

Gooseberry, several varieties, obviously indigenous, in woods and hedges in the limestone vales, on dry, gravelly soils, &c.

Black Currants (*Ribes Nigrum*), on the banks of brooks, &c., on rich soil between Landough, Cowbridge and How Mill.

Dutch Myrtle (*Myrica Gale*), in mountain bogs.

*Juniperus Communus*, Barry Isle, Barry Cliffs.

Willows, many varieties—

*Salix caprea*, is called the brown or Welsh willow.

„ *viminialis* is called Merhelyg.

All the large species are called Helyg ffrenig, which may be translated free-growing.

Common Briar (*Rosa canina*), in Welsh, March gieri or Mieri ffrenig, is very common.

Eglantine (*Rosa rubiginosa*), in woods and hedges of the limestone tract. [The Sweet Briar.]

Burnet Rose, of shorter stem, and bearing larger fruit than the common sort, in situations of some elevation.

Tailor's Briar (*Rosa arvensis*), stems slender, numerous, green and smooth, like rushes, with fewer or lesser spines. Whiter and later flowers than the common briar; more frequent in shaded woods than hedges.

Page 242. *Byronia Alba*, in woods and hedges everywhere. [An error, perhaps the lady's seal was mistaken for it.—J. S.]

Page 244. Wild Cherry or Mazard (*Prunus avium*), in woods and hedges, on dry soils.

Page 245. Linden or Teil tree (in Welsh *gwaglwlyfen* or bastard elm), near Pont nedd Vechan and Penarth.

Page 560. *Scabiosa succisa*, in Welsh y benlas, or blue head.

*Centaurea nigra*, in Welsh y bengaled, hard head.

Page 575. Common Red Clover (*Trifolium pratense*) in Welsh, Marchveillion

Page 587. White or Dutch Clover (*Trifolium repens*) in Welsh, Meilliou gwynion.

Page 592. Sainfoin (*Hedysarum onobrychis*) was introduced into Glamorgan under the name of French grass, about 1760, by Mr. Nicholl, of Ham.—E.W.

Page 594. A plant called by the Welsh, Gwyg bendigaid, is a wild sainfoin, growing naturally on the uplands adjoining the Vale of Teivy, in some of the mountain valleys of Brecon and Glamorgan, and in the valley of the Elain near Nant Wylt, in Radnorshire.

## ABBREVIATIONS

Used in this work, which may stand either for the singular or plural.

*Cal.* for Calyx.

*Caps.* „ Capsule.

*Carp.* „ Carpel.

*Cor.* „ Corolla.

*Fl.* „ Flower.

*Fr.* „ Fruit.

*L.* „ Leaf.

*Ped.* „ Peduncle.

*Lft.* for Leaflet.

*O* „ None.

*Pet.* „ Petal.

*Pist.* „ Pistil.

*Scp.* „ Sepal.

*Stam.* for Stamen.

*Stig.* „ Stigma.

*Inv.* for Involucre.

## TO EXAMINE PLANTS.

No satisfactory progress can be made without the assistance of a good lens, a small pair of forceps, a sharp penknife, and a needle stuck in a handle; and it is requisite, in commencing the study of Botany, to obtain a clear and accurate knowledge of the principal parts of a plant. These are the root, stem, leaf, flower and fruit. The **ROOT** may be known by never bearing buds, and is, with few exceptions, buried underground, where its function is to fix the plant in the ground, and absorb moisture for its nourishment. It may be tuberous, as some orchises; fibrous, as in most grasses; or fusiform, as in the carrot. In some cases it forms a receptacle for the storage of matter for the nourishment of the plant. The **STEM** may be underground or aerial. The *tuber* of the crocus, the stems of the lily of the valley and couch grass, are examples of the underground stem; while examples of the *aerial* stem are familiar to all. Some plants have the stem so shortened that they are called *stemless*, as the primrose. The stalk of the cowslip is not called a stem, but a *scape*, or flower-stalk, owing to its bearing no leaves or bracts. The point where a leaf springs from the stem is called a *node*, and the space between two nodes, an *internode*. The **LEAF** consists of a leaf-stalk or *petiole*, and blade. When the petiole is absent, the leaf is said to be *sessile*. The angle at the junction of the stem and leaf is called the *axil* of the leaf. The **FLOWER**.—A perfect flower consists of the *calyx*—a whorl of leafy organs called sepals; they are usually greenish. In some plants an outer row or epicalyx is present. Inside the calyx an inner whorl of *petals*, which are by most people considered the true flower, being mostly brightly colored; when taken together these are termed the corolla. The epicalyx, calyx, and corolla, are sometimes called the non-essential organs of reproduction, because any or all of them may be absent and yet the plant be able to produce perfect seed; whereas, should the remaining parts of the flower, viz., the stamens or pistil be absent, no matter how gaudy the calyx or corolla may be, no perfect seed can be formed; the stamens or pistil are therefore called the essential organs of reproduction. The whorl inside the petals consists of one or more stamens, each with a stalk called the *filament*, and a little pocket called the *anther*; this, when ripe, opens and sets free a dust-like substance called *pollen*. In the centre of the flower is the pistil or pistils, bearing at top one or more styles, each of which is terminated by a *stigma*. The stigma may be sessile or hair-like, cleft, knobbed, or other shape. The stigma has no epidermis, and is covered with an adhesive secretion, and when in perfection, some of the pollen grains from the anther being deposited upon it, either blown by the wind, or carried by the intervention of insects, or through any other cause, a change at once takes place; the pollen grains emit a tube which penetrating the loose tissue of the stigma passes through the style to the base of the pistil, now called the ovary, fertilization takes place, and the ovary and the minute bud-like bodies in it gradually develop into perfect seed vessel and seeds, each ready to germinate into another plant, the same as the parent. Should anything happen to prevent the pollen being deposited upon the stigma, the flower remains barren.

Cross fertilization is where the pollen from one plant falls upon the stigma of another individual of the same species, and is found to tend to greater fertility.

The calyx is sometimes of one piece, when it is said to be monosepalous. It is usually cleft at top as in the primrose; it is sometimes of other colours than green, as in the self-heal. In some plants it falls off as soon as the blossom opens, as in the poppy: it is then called fugacious. The corolla is likewise said to be monopetalous if it is not divided to the very base, even though it may be deeply cleft, as in the speedwell; and in like manner a petal may be cleft almost to the base. If the petals are alike and equal in size, the blossom is said to be *regular*; if unequal or if the divisions of a monopetalous corolla are unequal, the flower is called *irregular*. In Endogens the corolla (or the calyx and corolla together, when both appear to be present) is called the *perianth*. The same term is often used in the Monochlamydeæ. The ovary, or young seed-vessel, consists of one or more *carpels* or small fruits; these are quite separate from one another (*distinct*) as in the butter-

cup; or they are united into one fruit (*confluent*) as in the mallow, &c. These carpels in the latter case are often called cells, and the fruit is said to be 2-, 3-, 4-, or more celled. The part of the inside of the fruit, to which the seeds are attached, is called the *placenta*. The placenta may be either a *central* column, as in primrose and cowslip; or the seeds may be attached to the side of the seed-vessel: the placenta is then said to be *parietal*. When the ovary is found inside the flower (*i.e.*, calyx and corolla fixed beneath the ovary), as in primrose, the ovary is *superior*: if the flower grows on the top of the ovary, as in gooseberry or carrot, the ovary is *inferior*. The seed consists of a *radicle* (the future root), a *plumule* (the future stem), and one, two, or more cotyledons or lobes (the future seed-leaves) and sometimes a supply of albuminous matter towards the development of the young plant, the seed is attached to the placenta by a little cord called the funiculus, and the point of the seed to which the cord is attached is called the hilum.

When flowers contain both stamens and pistils they are called *hermaphrodite*. A flower with stamens only is called a *male* flower; one with pistils only a *female* flower. Some plants produce certain flowers which contain stamens only, and others which bear only pistils, while both kinds are found on the same plant; such are called *monœcious*. Examples,—hazel and oak. In other kinds the male flowers are found exclusively on one plant, while another plant exactly alike in all other respects bears nothing but female flowers; such are said to be *diœcious*. Example,—nettle. In some few plants hermaphrodite flowers are scattered among separate male and female flowers; such plants are termed *polygamous*. Example—knapweed.

Beside the above, which may be considered as the regular and necessary parts of a plant, there are several others which occur occasionally, and are termed appendages. These are—

*Stipules*, a pair of leafy organs situated at the base of the leaf-stalk, where it joins the stem. They are sometimes very small, occasionally as large or larger than the leaf itself, and vary much in size in different plants. They are well seen in the hawthorn, vetch, &c. In the rose they grow to the side of the leaf-stalk, and are said to be *adnate*. In the elm and many other plants they are *deciduous* (falling off early), and are therefore only seen with young leaves.

*Ochrea*, a kind of stipule forming a thin membranous sheath round the stem, just at the springing of the leaf-stalk. Examples—dock, persicaria.

*Ligule*, a thin membranous prolongation of the sheath of most grasses, where the blade springs from.

*Bract*, a leaf from the axil of which a flower-stalk springs. It is usually different in shape from the ordinary leaf. Examples—speedwell, sage. Any leafy organs, not being parts of the flower, nor true leaves, and attached to the flower-stalk, are also *bracts*. The strawberry and mallow, &c., have a whorl of bracts immediately outside the true calyx. By some this is described as an epicalyx.

*Involucre*, the bracts (usually in a whorl, more or less complete) at the base of an umbel. If the umbel is compound the whorl of bracts at the base of the umbellule is called *involucel*. Examples—carrot, fool's parsley. The bracts enclosing the florets of *composite* plants are often termed an *involucre*.

*Spathe*, a sheathing bract more or less enclosing the whole mass of flowers. Examples—arum, onion, lime tree, &c.

*Tendrils*, thread-like organs, whose office is to coil round the stems, &c., of other plants to obtain support for the plant from which they spring. Examples—pea, Bryony, &c.

*Thorns* are the undeveloped, hardened, pointed ends of branches, and are continuous with the wood of the stem. Examples—hawthorn, sloe.

*Prickles* are appendages to the bark alone, and can be removed without breaking the wood at all. They are, therefore, quite different from thorns. Examples—rose, bramble.



## CLASSIFICATION ADOPTED IN THIS WORK.

The characters have been cut down as far as possible, so that, while they embrace all the plants of the district, they would by no means give a correct idea of the characters of the same orders in a European or Universal Flora.

For purposes of classification, the vegetable kingdom is divided into three sub-kingdoms, viz., Exogens, Endogens, and Acrogens, and these again further subdivided into natural orders, genera, species, and varieties.

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### EXOGENS.

These have always true flowers, *i.e.*, with stamens and pistils, either together in the same flower, or stamens in one flower and pistils in another. The seeds have two seed lobes, hence they are sometimes called *Dicotyledons*. The leaves are always more or less net-veined, having one or more main-veins, which branch and fork, so as to form a network. The edges of the leaves are very commonly notched or toothed, and the leaves are often cleft and divided. The parts of the flower (sepals, petals, and stamens), are very commonly 5 or a multiple of 5 in number, sometimes 4, very seldom 3 or 6. Either the net-veined leaves—their divided character or toothed edges—or the number of parts in the flower—or these characters combined, are the most recognisable features of an Exogen, of which the violet, buttercup, rose, primrose, may be taken as examples.

Exogens are divided into Thalamifloræ, Calycifloræ, Corollifloræ, and Monochlamydeæ.

#### THALAMIFLORÆ.

Flowers with both calyx and corolla. Petals distinct, more than one. Stamens always fixed to the receptacle, *beneath* the ovary, not to the calyx. Ovary always superior.

#### NATURAL ORDERS.

##### STAMENS 20 OR MORE.

*With filaments free to the base and ovary superior.*

**Ranunculacæ.** Carpels, several distinct. Sepals more than 2; leaf-stalk usually dilated at the base. Exstipulate.

**Papaveracæ.** Carpels consolidated into one fruit (poppy-head) petals 4. Sepals 2, deciduous. Exstipulate.

**Cistacæ.** Carpels consolidated. Sepals 3 large and 2 smaller. Very small shrub. Aestivation wrinkled. Stipules free.

**Tiliacæ.** Trees. Stipules free, deciduous. Inflorescence with a spathe-like bract.

*With filaments free to the base and ovary slightly inferior.*

**Nymphaeaceæ.** Petals passing into stamens. Aquatic plants, with large flower and floating leaves.

*With filaments united into one or three sets.*

**Malvaceæ.** Filaments united into one set or tube; carpels forming a ring; leaves alternate with stipules.

**Hypericaceæ.** Filaments united into three or more sets. Fruit, a capsule, sometimes a berry; leaves mostly opposite. Stipules none.

#### STAMENS LESS THAN 20.

*Flowers regular, filaments free to the base.*

**Berberidaceæ.** Large shrubs. Fruit, a berry. Leaves ciliate-serrate. Stamens irritable.

**Aceraceæ.** Trees. Fruit twin, winged.

**Cruciferae.** Flowers cruciform. Stamens 4 long and 2 shorter, sometimes only 4 or even 2; petals 4. Capsule a 2-celled pod (sometimes 1-celled and 1-seeded), or a jointed indehiscent pod, not opening but breaking asunder at the joints.

**Linaceæ.** Carpels united into one fruit, a capsule; placentation parietal. Sepals five. Petals 5. Styles 4 or 5. Leaves entire; vernation flat.

**Droseraceæ.** Carpels united into one fruit. Leaves all radical, covered with glandular hairs; vernation circinate.

**Caryophyllaceæ.** Stamens 4, 5, 8, or 10, never 6. Capsule 1-celled, always many seeded. Placentation free central. Stigmas filiform.

*Flowers regular. Stamens united at the base.*

**Geraniaceæ.** Carpels beaked, each with a long arm, united when young, divided when ripe. Leaves pinnately or palmately lobed.

**Oxalidaceæ.** Seed-vessel without beak. Leaves ternate.

**Balsaminaceæ.** Lowest sepal cowlled and spurred. Stam. 5. Filaments united at apex.

*Flowers irregular—spurred.*

**Violaceæ.** With stipules. Stamens 5. Anthers coherent.

**Fumariaceæ.** Stamens 6. Filaments coherent. Diadelphous. Leaves much divided.

*Flowers irregular—spurless.*

**Polygalaceæ.** Stamens 8. Diadelphous.

**Resedaceæ.** Stamens 8 or more free. Petals more or less cleft.

Several species of *erica* and *statica* are difficult to be distinguished from this section. See these plants.

#### CALYCIFLORÆ.

Flowers with both calyx and corolla. Corolla usually of several petals, sometimes only of one. Stamens fixed to the calyx, which is often adherent to the ovary. Ovary often inferior.

**Celestraceæ.** Exstipulate. Flowers with a large fleshy disc closely surrounding the ovary, and covering the bottom of the calyx. Stamens 4-5.

**Rhamnaceæ.** Corolla regular. Polypetalous. Stamens 4 or 5. Stipules minute. Shrubs with greenish flowers.

**Leguminosæ.** Flowers papilionaceous (butterfly shaped). Fruit a legume or pod, 2-valved.

**Rosaceæ.** Stamens 20 or more. Calyx most permanent. Flowers regular. Leaves alternate, stipulate. Fruit various, as achenes, follicles, drupes or poms.

**Onagraceæ.** Flowers regular. Fruit inferior, very long, or when short covered with bristles. Parts of the flower in multiples of two.

**Haloragaceæ.** Fruit inferior. Leaves verticillate. Petals minute or wanting. Flowers monœcious. Water plants.

**Lythraceæ.** Stamens inserted in the tube of the monosepalous calyx. Style 1. Ovary superior, 2-celled.

**Cucurbitaceæ.** Corolla monopetalous. Flowers diœcious. L. palmate, rough. Plant with tendrils.

**Portulacææ.** Sepal 2. Ovary superior, 1-celled. Leaves simple, without stipules. Petals with incurved points.

**Illecebraceæ.** Stamens 3-5. Small prostrate plants, with membranaceous stipules.

**Grossulariaceæ.** Fruit inferior. Calyx and ovary combined. Petals small, alternating with the stamens. Fruit a 1-celled many-seeded berry.

**Crassulaceæ.** Fruit superior. Leaves fleshy. Petals and fruit in multiples of one another. Follicles many-seeded.

**Saxifragaceæ.** Calyx superior, half inferior and inferior. Petals 5. Stamens to 10. Capsule with 2 diverging beaks.

**Araliaceæ.** Fruit inferior. Leaves alternate. Styles several. Ovary 2 or more celled. Fruit a berry.

**Cornaceæ.** Ovary inferior. Fruit a drupe. Fl. cymose. Leaves opposite. Stamens 4. Shrub.

**Loranthaceæ.** Ovary inferior, diœcious. L. opposite. Parasitic shrubs.

**Umbelliferaceæ.** Flowers in simple and compound umbels. Petals with incurved points. Stamens 5. Fruit 2-celled.

**Campanulaceæ.** Ovary inferior, 2-celled. Flower monopetalous, withering on the fruit. Leaves alternate. Stamens equal in number to the lobes of the calyx and corolla. Filaments broadened at the base.

## COROLLIFLORÆ.

Flowers with both calyx and corolla. Corolla of one petal. Stamens attached to the corolla.

**Caprifolaceæ.** Ovary inferior, 1-3 celled. Fruit a berry. L. opposite. Fl. cymose.

**Rubiaceæ.** Ovary inferior, 2-lobed, in one species a berry. Leaves verticulate, stems angular.

**Valerianaceæ.** Ovary inferior, 1-celled and 1-seeded; if more the cells barren. Calyx limb unrolling into a feathery pappus, or toothed. Anthers not united.

**Dipsacaceæ.** Ovary inferior. Flowers in compact heads. Anthers not united.

**Compositæ.** Calyx with a membranous or papose limb. Anthers combined in a tube. Flowers in heads surrounded by an involucre.

**Ericaceæ.** Ovary superior, seated on a disc. Stamens free from the corolla. Anthers opening by pores. Very small, mostly evergreen shrubs.

**Ilicaceæ.** Calyx imbricated. Stigmas nearly sessile. Ovary several celled, superior. Tree with spiny leaves.

**Jasminaceæ.** Stamens 2. Calyx and corolla absent in one species (the ash tree). Fruit dry and winged. In the privet a berry. Leaves opposite. Shrub and tree.

**Apocynaceæ.** Ovary superior. Corolla twisted. Stigma capitate, contracted in the middle. Follicles 2. Small shrubby plants.

**Gentianaceæ.** Corolla twisted in æstivation. Ovary 1-2 celled. Many seeded, superior. Leaves ribbed. Small herbs.

**Polemoniaceæ.** Corolla regular. Stigmas 3. Ovary 3-celled, 3-valved, superior.

**Convolvulaceæ.** Calyx imbricated, sometimes unequal. Corolla with the limb plaited. Ovary 2-4 celled, superior. Twining plants.

**Solanaceæ.** Calyx 5 partite. Cor. with the limb 5-cleft. Anthers opening by pores or slits. Ovary 2, or spuriously 4-celled, superior. Inflorescence mostly axillary.

**Scrophulariaceæ.** Flowers irregular. Calyx and corolla 4-5 lobed. Stamens 2-5. Capsule 2-celled. Leaves alternate.

**Orobanchaceæ.** Flowers irregular. Stamens 4; 2 long, and 2 short. Style 1. Ovary 1-celled, superior. Leafless, scaly parasitic plants.

**Verbenaceæ.** Leaves opposite. Stamens 4. Stem square. Capsule 2-4 celled. Flowers regular.

**Labiataæ.** Ovary superior, 4-lobed. Corolla irregular, mostly 2-lipped. Leaves opposite. Stem square.

**Boraginaceæ.** Ovary superior, 4-lobed. Corolla regular. Stamens 5. L. alternate.

**Lentibulariaceæ.** Flowers irregular. Corolla 2-lipped. Stamens 2. Stigma 2-lipped. Ovary 1-celled, superior.

**Primulaceæ.** Stamens opposite the lobes of the corolla. Calyx 4-7 cleft. Corolla 4-7 lobed, sometimes wanting and then the stamens alternating with the calyx segments. Ovary superior, with free central placenta. Stigma capitate.

**Plumbaginaceæ.** Calyx plaited, persistent. Corolla deeply cleft into 5 segments, with 5 stamens seated at the base. Styles 5. Ovary superior, 1-celled with one ovule. Flowers capitate.

**Plantaginaceæ.** Sep., petals, and stamens, 4 each. Corolla thin membranous. Filaments very long. Stigma unilateral. Flowers sometimes monœcious.

#### MONOCHLAMYDEÆ.

Flowers with calyx or corolla only, not both.

**Amaranthaceæ.** Leaves alternate. Fruit 1-seeded. Flowers with 3 bracts. Stamens inserted below the ovary. Stigmas 2 or 3.

**Chenopodiaceæ.** Perianth 3-5 cleft. Fruit a utricle. Leaves more or less fleshy. Stipules 1. Ovary 1-celled, or with a solitary ovule.

**Polygonaceæ.** Perianth 4-6 partite. Styles and stigmas several. Achenes triangular, sometimes compressed. L. with a tubular sheath (ochreæ).

**Scleranthaceæ.** Perianth, tubular, 4-5 cleft, enclosing the utricle. Styles 2. Stamens 10, several barren. No stipules.

**Thymelaceæ.** Perianth tubular. Stamens inserted into the tube. Style 1. Stigma 1. Fruit a berry.

**Empetraceæ.** Small shrub. Flowers dioecious. Perianth of several scales in 2 rows. Stamens 3. Fruit a berry.

**Euphorbiaceæ.** Flowers imperfect. Perianth, 3 partite, or absent. Styles 2-3. Capsule 2-3 celled.

**Callitricachaceæ.** Flowers monœcious. Perianth 0. Style 1. Ovary 4-celled. Leaves opposite, simple.

**Urticaceæ.** Flowers monœcious or diœcious. Achenes lenticular. Stamens elastic. Stipules membranous, free.

**Ulmaceæ.** Trees, fl. mostly perfect. Perianth 3-8 cleft. Fruit a double samara.

**Amentiferæ.** Male fl. in catkins. Female fl. in catkins, spikes, heads, or solitary. Seeds in an ovary.

**Coniferæ.** Seeds quite naked, protected by scales of a cone or enclosed in the thickened calyx. Trees or shrubs with stiff needle-like leaves. Male fl. in catkins.

## ENDOGENS.

These have also true flowers, usually with both stamens and pistils, sometimes monœcious, very rarely diœcious. The seed has only one lobe or cotyledon, hence often called Monocotyledons. The leaves are (with two exceptions in this district, viz., *Paris quadrifolia* and *Tamus communis*), not net-veined, but with more or less parallel veins proceeding from the base of the leaf, and uniting again at its extremity, and connected by simple cross veins, but no branching net-work. The leaves are simple, never lobed, cut, cleft, or dissected, or even notched or toothed at the edge. The parts of the flower (sepal, petals, or stamens) are mostly 3, 6, or 9. A few species (*Naidaceæ*) have 4 stamens, but none 5 or 10. The peculiar venation of the leaves and their entire outline, and the arrangement of stamens, mostly in threes or multiples of threes, will usually readily distinguish an Endogen, of which lilies, crocuses, rushes, and grasses are good examples. Endogens are divided into Dictyogens, Petaloideæ, and Glumaceæ.

### DICTYOGENS.

*Leaves net-veined.*

**Tamaceæ.** Flowers in racemes, diœcious. Plant climbing. Leaves alternate.

**Trillaceæ.** Flowers solitary, perfect. Leaves whorled.

### PETALOIDEÆ.

*Floral envelopes mostly petaloid; perianth single, or sometimes wanting.*

**Hydrocharidaceæ.** Flowers diœcious. Perianth regular, 3 outer segments green. Ovary inferior.

**Orchidaceæ.** Perianth of 6 segments, very irregular. Stamens, or rather pollen masses growing on the pistil. Ovary inferior.

**Iridaceæ.** Perianth in 6 divisions. Stamens 3. Anthers opening outwards. Ovary inferior.

**Amaryllidaceæ.** Perianth in 6 divisions. Stamens 6. Anthers opening inwards. Leaves fleshy.

**Liliaceæ.** Perianth of 6 segments, petal like, usually highly coloured. Anthers opening inwards. Ovary 3-celled superior.

**Juncaceæ.** Perianth of 6 segments, stiff and glume-like, or coloured internally, and herbaceous. Stigmas 1-3. Seed-vessel 1-3 celled. Superior.

**Alismaceæ.** Perianth of 6 segments, the inner 3 petal-like. Stamens 6, 9, or more. Ovaries superior, 3-6, or of numerous achenes.

**Typhaceæ.** Monœcious. Flowers in dense spikes. Perianth of 3 scales or hairs. Stamens 1-6. Ovary solitary 1-celled. Leaves rigid, sword-shaped.

**Araceæ.** Flowers arranged on a club-like spadix, enclosed in a convolute spathe.

**Lemnaceæ.** Leaves or fronds floating on the surface of the water. Stemless. Flowers springing from below the edge of the fronds.

**Naiadaceæ.** Submerged or floating plants. Flowers in a loose spike or spadix. Perianth scale-like or none. Stamens 1-4. Ovaries 1-4. Leaves very cellular.

#### GLUMACEÆ.

*Perianth of one or two chaffy scales.*

**Cyperaceæ.** Flowers perfect or imperfect, arranged in spikelets, enclosed in the axil of a bract or glume. Stems solid. Leaves with the sheaths closed.

**Gramineæ.** Stems usually hollow. Nodes solid with one leaf to each. Leaves alternate, with sheaths split on one side, having in the axil at the base of the linear blade a small membranous ligule.

#### ACROGENS.

Plants bearing no true flowers, but reproduced by bodies resembling seeds called spores, which have no embryo or cotyledons. The venation of the frond is forked, and often very complicated.

**Equisitaceæ.** Fructification in terminal spikes consisting of peltate scales, under each of which are several capsules, containing spores surrounded by four elastic filaments. Branches in whorls, joints of stem sheathing.

**Filices.** Spores enclosed in cases, arranged in clusters (sori), on the back of the leaves or fronds, sometimes on the margin or in the axil, occasionally in radical or terminal spikes.

**Marsilaceæ.** Spore cases globular, seated in the axil of the leaves at root. Fronds circinate when young.

**Lycopodaceæ.** Spore cases sessile, in the axils of the terminal leaves, arranged as spikes. Plant with tiled leaves.

## GENERA AND SPECIES.

### EXOGENS—THALAMIFLORÆ.

#### 1.—RANUNCULACEÆ.

**CLEMATIS.** Achene with a feathery awn, æstivation valvate, L. opposite.

**C. VITALBA.** Traveller's Joy. *Cydd y coed, Dringiedydd, Coluddion y diawl, Tripa-y-gwr-drwg, Barf y gwr Hen.* L. pinnate. Flowers in panicles, sep. 4, white, pet. O. July. A climbing shrub common in woods and hedges. Penarth, Leckwith, &c.

**ANEMONE.** Achene not awned, æstivation imbricate, pet. without a nectariferous pore at base.

**A. NEMOROSA.** Wood Anemone. *Blodau'r gwynt, Blodueyn-y-gwynt.* Sep. O, pet. 5, scape with inv. of 3 L. distant from the flower. Fl. white or pinky. Herb. April. Woods, common. Llandaff, St. Fagan's, &c.

**A. JAPONICA.** Wenvoe woods, an escape or planted.

**ADONIS.** Cal. of 5 sep., pet. 5-10 without a nectariferous pore at base.

**A. AUTUMNALIS.** Pheasant's Eye. *Llygaid y goedair.* L. alternate, tri-pinnatifid. Cor. scarlet with dark spot at base. Herb. June. Only as an outcast. Penarth, and near Tondur.

**RANUNCULUS.** Sep. 5, rarely 3. Pet. 5, rarely more, with a nectariferous pore at the base of each. Achenes in globose or elliptical heads.

*Flowers white. Water herbs.*

**R. HEDERACEUS.** Ivy-leaved Crowfoot. <sup>*Craffangt.*</sup> *Craffangc y fran eiddewddail.* L. reniform, 3-5 lobed. Stam. 5-10. Pet. shorter than sep. Car. blunt. Herb. April. Wet places, frequent, Penylan, Penarth, Grangetown, Moors, &c.

**R. CÆNOSUS.** Mud Crowfoot. *Cranfrangc y llaca.* L. cordate-reniform, 5-8 lobed, pet. longer than sep., style terminal, persistent. Herb. April. Common in wet places. E. Moors, St. Fagan's, Grangetown, Penarth, Pontypridd.

**R. CIRCINATUS.** Rigid Water Crowfoot. L. all submersed and cleft into capillary, rigid segments, forming a whorl, with circular outline. Herb. June. Rare. Ditches, Newport Road, &c.

**R. TRIPARTITUS.** Stem floating. L. trifid, lobes 2-4 fid, style long. Herb. May. Rare. Grange and Pengam Moors.

**R. FLUITANS.** River Crowfoot. *Craffangc y fran aſonawl.* Segments of L. repeatedly forked, long and limp. Stipules large, adnate. Herb. June. Running water, common. Taff, Ely, and Rumney Rivers, &c.

**R. CONFUSUS.** Conical-fruited Water Crowfoot. Floating L., 3-lobed, sometimes wanting, submersed leaves in capillary segments, stigma strapshaped, receptacle conical. Herb. May. Ditches frequent, Moors at Shrimphouse, Grangetown, &c.

**R. AQUATILIS.** Common Water Crowfoot. *Crafffanc y fran dyfrle*. Floating L., 3-lobed, sometimes wanting, stigma rounded, receptacle globose. Herb. June. Ponds and ditches, common.

*Flowers yellow.*

**R. ARVENSIS.** Corn Crowfoot. Erect. Carp. prickly. L. once or twice trifid, segments linear. Herb. June. Rare, cornfields. Caerphilly.

**R. PARVIFLORUS.** Small-flowered Crowfoot. *Crafffanc y fran man-fodeuog*. Prostrate. Car. tubercled. L. 3-5-lobed, hairy. Herb. June. Frequent on the coast, from Sully to Southerndown.

**R. LINGUA.** Greater Spearwort. *Blaen y gwaew mwyaſ*. Erect. L. lanceolate, sessile. Flowers larger than a penny. Herb. June. Very rare. Watery places. Near Coedriglan. *Mrs. Traherne*.

**R. FLAMMULA.** Lesser Spearwort. *Poethflam*. *Blaen y gwaew lleiaſ*. Stem decumbent, rooting. L. lanceolate or linear-lanceolate, stalked. Herb. June. Common, ditches, &c. Leckwith, St. Fagan's, &c.

**R. FICARIA.** Lesser Celandine. *Llygaid Ebrill*, *Bronwys*, *Llygaid y dynawed*, *Bronwt*. Sep. 3, pet. 8-12 varnished, L. simple, angular-cordate. Herb. March. Very common. Hedges, &c., everywhere.

**R. BULBOSUS.** Bulbous Crowfoot. *Chwys Mair*, *Blodau yr ymenyn*. Root bulbous, St. and L. hairy, L. ternately cut. Calyx reflexed. Achenes smooth. Herb. May. Common. Meadows. Llandaff, St. Fagan's, &c.

**R. SCELERATUS.** Celery-leaved Crowfoot. *Crafffanc yr eryr*. St. and L. glabrous. Stem hollow. Heads of fr. oblong. Herb. June. Watery places, common. Grangtown, &c.

**R. AURICOMUS.** Goldylocks. *Peneuraidd*. Erect, nearly glabrous; root-L. reniform, 3-lobed; st-L. digitate; segm. linear; pet. often wanting. Herb. April. Rare. Woods, Caerau. Melin Griffith.

**R. ACRIS.** Acrid Buttercup. *Crafffanc y fran syth boethus y gweunydd*. Erect; st., L. and sep. hairy; L. deeply 3-fid; segm. cleft. Herb. May. Common. Meadows.

**R. REPENS.** Creeping Buttercup. *Crafffanc y fran ymlusgaidd*. St. with creeping runners, hairy. Ped. furrowed. Herb. May. Common. Road side and waste places.

**HELLEBOREÆ.** Fruit many seeded. Sepals mostly coloured. Petals small or obsolete.

**CALTHA.** Sep. 5. Pet. O. L. simple.

**C. PALUSTRIS.** Marsh Marygold. *Troed yr Ebol*, *Gold*, *neu Rhuddos y gors*. L. cordate-rounded, crenate. Fl. large, yellow. Herb. March. Marshy places, common. St. Fagan's, Ely, Llanishen, &c.

**TROLLIUS.** Sep. 10-15. Petals 5 or more, linear, flat.

**T. EUROPEUS.** Globe Flower. *Cronell*. Fl. large, globose, lemon-yellow. Sep. converging. L. deeply, 5-fid. Segments cut. St. erect. Herb. June. Frequent. Ely, Taff, and Rhymney Valleys, St. Fagan's, Pwllpant, &c.

**HELLEBORUS.** Sep. 5 persistent, green. Pet. tubular. Follicles sessile.

**H. FÆTIDUS.** Stinking Hellebore. *Crafffanc yr arth*, *Llewyg y llyngyr*, *Hylithr*. Sep. converging. Flower green, tinged with purple, many in a terminal panicle. L. pedate. Herb. March. Thickets. Rare. Sully. Dunraven, St. Hilary.



**AQUILEGIA.** Sep. 5, petaloid. Pet. 5, funnel-shaped, with long horned spurs.

**A. VULGARIS.** Common Columbine. *Madwysg cyffredin.* Root-L. biternate. Flowers blue, sometimes white or purple, few, drooping. Herb. May. Hedges. Frequent Llanishen, Lisvas, Taff's Well, Tongwynlais, &c.

**DELPHINIUM.** Fl. irregular. Upper sep. spurred. Pet. 4 united, 2 upper ones with appendage, one appendage within the spur.

**D. CONSOLIDA.** Larkspur. *Yspardin y marchog.* L. sessile, deeply cleft, segments linear. St. erect. Fl. blue in racemes. H. June. Outcast, very rare. Fields near New Cemetery.

**ACONITUM.** Sep. 5, petaloid, upper helmet-shaped. Two upper pet. tubular, under the hooded sep.

**A. NAPELLUS.** Monkshood. *Cwcwll y mynach, Bleidd-dag.* St. erect. L. deeply 5-fid. Segments linear, cut. Flowers blue, in a close terminal raceme. Herb. July. Riversides. Common in the Ely, Taff, and Rumney Valleys.

**PCEONIA.** Sep. 5. Pet. 5-10, regular. Fr. 2-5 follicles.

**P. CORALLINA.** Pæony. *Blodau'r brenin.* L. biternate. Lfts. oval, entire. Fl. large, crimson. Herb. May. Very rare. Steep Holme.

## 2.—BERBERIDACEÆ.

**BERBERIS.** Sep. 6. Pet. 6. Stamens 6, irritable. L. simple.

**B. VULGARIS.** Barberry. *Pren melyn, Draenen ysbinus.* L. ovate, ciliate-serrate, thorns triple. Fl. in racemes, yellow. Shrub. June. Hedges. Rare. St. Nicholas and near Flemingstone.

## 3.—NYMPHACEÆ.

**NYMPHÆA.** Sep. 4. Pet. many. Stamens becoming petaloid.

**N. ALBA.** White Waterlily. *Alaw, Y Fagwyr wenn, Lili'r Dwr.* L. cordate-orbicular floating. Fl. large, white. Water herb. July. Not common. Courtyrala, Coedriglan, Llyn fawr and Llyn vach.

**NUPHAR.** Sep. 5. Petals many, small.

**N. LUTEA.** Yellow Waterlily. *Bwlitis, Lili melyn y dwr.* Stigma 10-20 rayed, rays not reaching to margin. L. oblong-cordate. F. yellow. Water herb. Not common. Same localities as last species.

## 4.—PAPAVERACEÆ.

**PAPAVER.** Fr. urn-shaped. Stigma 4-20 rayed sessile. Sap milky.

**P. SOMNIFERUM.** Opium Poppy. *Bulwg ffrengig, Llys y cwsig.* L. clasping, glabrous. Pet. white with violet spot at base. Herb. July. Frequent about Cardiff Docks.

**P. ARGEMONE.** Rough Long-Headed Poppy. *Pabi neu Drewg Hirben-gwrychog.* Fl. red. Caps. oblong, bristly. Herb. June. On Ballast. Common. Cardiff, Penarth, &c.

**P. HYBRIDUM.** Rough Short-Headed Poppy. *Pabi amryw, genedlant.* Fl. red. Caps. nearly globose, bristly. Herb. July. On Ballast. Rare. Cardiff, Penarth, &c.

**P. DUBIUM.** Long Smooth-headed Poppy. *Pabi neu Drewg Hirben-llyfn.* Fl. red. Cap. oblong, smooth. Herb. June. In cornfields. Not common. Leckwith, &c.

**P. RHÆAS.** Common Poppy, Corn Rose. *Llygad y cythraul, Papi cryn-ben-llyfn.* Fl. red. Cap. globose, smooth. Herb. June. Fields. Frequent. Penylan, Coedygoras, &c.

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**MECONOPSIS.** Stigma 5-6 rayed on a short style.

**M. CAMBRICA.** Welsh Poppy. *No Welsh name.* Caps. oblong. L. pinnate, cut. Fl. yellow. Herb. June. Very rare. Coedriglan, an escape probably.

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**ROEMERIA.** Pod 3-valved, linear. Stigma 2-4 lobed. Sap yellow.

**R. HYBRIDA.** *No English or Welsh name.* L. bipinnatifid. Segments linear. Fl. violet. Pod bristly. Herb. June. Ballast Banks. Rare. Penarth.

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**GLAUCIUM.** Pod 2-valved, linear. Stigma lobed. Sap yellow.

**G. LUTEUM.** Horn Poppy. *Pabi corniog Melyn, Llwydlas.* Stem. L. clasping, lobed, hairy, glaucous. Fl. yellow. Herb. June. Seashores, frequent. Penarth, Barry, Leys, &c.

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**CHELIDONIUM.** Stigmas 2. Pod 2-valved.

**C. MAJUS.** Great Celandine. *Dilwydd felen, Llyn y Llygaid, Llygadlys, Llys y wennol.* L. large, thin, pinnatifid, glabrous. Fl. yellow. Herb. June. Hedgebanks. Common. Llandaff, St. Fagan's, Lisvane, Pencoed, &c.

#### 5.—FUMARIACEÆ.

**FUMARIA.** Fruit roundish, 1-seeded.

**F. CAPREOLATA.** Climbing Fumitory. *Mwg y ddaer afrollys.* Sep. ov., toothed, as broad as cor. tube. Fl. creamy pink. Stem climbing or spreading. Herb. June. Waste ground. Frequent. Llandaff, Penarth, &c.

**F. OFFICINALIS.** Common Fumitory. *Mwg y ddaer cyffredin, neu Meddygawl.* Sep. ov. lanceolate. Narrower than corolla tube. Stem diffuse. Fl. rose or purple. Herb. June. Waste corners. Frequent. Penarth, Llandaff, &c.

**F. PARVIFLORA.** Small Flowered Fumitory. Sepals minute, ov. cut. Herb. June. Rare. Only on the ballast.

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**CORYDALIS.** Pod elongated, many-seeded.

**C. LUTEA.** Yellow Corydalis. St. erect. Fl. yellow. L. triternate, no tendrils. Herb. June. Walls. Naturalized at Southerndown. *Miss Vachell.*

**C. CLAVICULATA.** Climbing Corydalis. *Mwg y ddaer ga-faelgar.* Climbing with tendrils. L. pinnate. Flower creamy yellow. Herb. June. Rare. Roofs, &c. St. Fagan's, Pwlypant, near Wenvoe.

#### 6.—CRUCIFERÆ.

**SILICULOSA.** Pod short, usually not much longer than broad.

**CRAMBE.** Pod globose, 1-seeded, without a vertical septum.

**C. MARITIMA.** Sea Kale. *Ysgedd arfor, Bresych y mor.* L. large, fleshy, wavy, glaucous, roundish. Fl. white. Puncicle much branched. Herb. June. Seashores. Rare. Leys, St. Donat's.

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**CAKILE.** Pod angular, 2-jointed; each joint 1-seeded, one occasionally barren.

**C. MARITIMA.** Sea Rocket. *Hegydd y morlan.* L. fleshy, pinnatifid. Fl. pink. Herb. June. Sandy shores. Frequent. Sully, Barry, Leys, &c.

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*Pod divided by a vertical septum into 2 cells, each cell one or more seeded.*

**CAMELINÆ.** Pod obovate, very convex, many seeded.

**C. SATIVA.** Gold of Pleasure. L. lanceolate. Fl. yellow. Herb. June. Rare. East Moors and Llanishen.

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**COCHLEARIA.** Pod very convex, many-seeded, keeled. Fl. white.

**C. OFFICINALIS.** Common Scurvy Grass. *Morlwyau meddygawl neu cyffredin.* Root-L. roundish, cordate. Upper L. sessile, oblong. Pod globose or oval, very convex. Herb. May. Coasts. Common. Penarth to Southerndown.

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**C. ANGLICA.** English Scurvy Grass. *Morlwyau brutanaidd.* Root. L. oval, entire, stalked. Stem L. sessile, toothed. Pod oval, compressed. Herb. May. Muddy places. Frequent. Penarth, &c.

**C. DANICA.** Danish Scurvy Grass. *Morlwyau Danaidd neu eiddew-ddail.* L. cordate-angular. Herb. May. Not common. Llantwit Major, St. Donat's, &c.

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**ARMORACIA.** Pod globose, many-seeded, not keeled.

**A. RUSTICANA.** Horse Radish. *Rhuddygl mawrth.* Root-L. large, oblong, crenate. Stem-L. lanceolate. Fl. white. Herb. May. Not common. About houses, Leckwith, St. Athans, Llantwit, &c.

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*Pods laterally compressed. Cells each 1-seeded.*

**CORONOPUS.** Pod wrinkled or warted. Plants prostrate.

**C. RUELLII.** Swine's Cress. *Berwr yr moch, Olbrain dafadenawg.* Pods entire. mucicated. Style prominent. L. pinnatifid. Segm. cut. Fl. white. Herb. June. Fields. Not common. Cardiff Docks. Plentiful.

**C. DIDYMA.** Lesser Wart Cress. Pods notched, 2-lobed, minute. Style very short. L. pinnate. Herb. July. Common about Cardiff.

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**LEPIDIUM.** Petals equal. Valve of pod keeled. Plants erect.

**L. DRABA.** Whitlow Pepperwort. Pod broadly cordate. L. oblong. Stem-L. sagittate, clasping. Style prominent. Fl. white. Herb. May. Common about Cardiff Docks, &c.

**L. SMITHII.** Pod oval, smooth. L. lanceolate. Stem-L. sagittate, clasping. Style prominent. Fl. white. Herb. June. Frequent. Cardiff, Penarth, &c.

**L. RUDERALE.** Narrow-leaved Pepperwort. Petals usually 0. Stamens mostly 2. Lower L. pinnatifid. Upper L. entire. Herb. July. Waste ground. Common. Bute Docks, Penarth, Barry, &c.

**L. LATIFOLIUM.** Broad-leaved Pepperwort. *Berwyr gwylt, Pybyrlllys llydanddail.* L. ovate-lanceolate, serrate or entire stalked. Herb. July. Marshes. St. Donat's, &c.

**L. CAMPESTRE.** Pod oval, rough. L. lanceolate. Stem-L. clasping. Style scarcely longer than notch of capsule. Herb. June. Common. Penarth, Ely, St. Fagan's, &c.

**L. SATIVUM.** Garden Cress. *Berwyr Ffrengig, neu yr Ardd.* Style very minute. Pod orbicular, winged. Stamens 6. Lower L. pinnatifid. Upper L. entire. Herb. June. Frequent. Roath, Newhouse, &c.

**THLASPI.** Pod, laterally compressed. Cells each many-seeded. Circular notched, winged.

**T. ARVENSE.** Penny Cress. *Coed y wasg y maes.* St.-L. sagittate sessile. Fl. white. Herb. July. Rare. Temperance Town, and occasionally on the ballast.

**IBERIS.** Petals unequal. Pods laterally compressed. Cells each 1-seeded. Notched. Valves winged.

**I. AMARA.** Bitter Candytuft. *Beryn Chwerw, Berwr y-glinwst.* L. lanceolate, acute, cut. Fl. white. Herb. June. Dusty Forge, Pontypridd. Outcast.

**CAPSELLA.** Pods laterally compressed. Many-seeded. Triangular keeled, not winged.

**C. BURSA-PASTORIS.** Shepherd's Purse. *Llys tryfal, Pwrs y bugail.* Root-L. pinnatifid. Stem-L. lanc. sessile, sagittate at base. Fl. white. Herb. May. Common everywhere.

*Pod dorsally compressed, and divided by a lateral septum into two cells.*

**KONIGA.** Seeds 1-2 in each cell. Fil. not toothed. Hairs of L. forked. Stem rather woody.

**K. MARITIMA.** Sweet Alyssum. L. lanceolate. Stem branched. Pod elliptic. Fl. white. Shrubby. August. Frequent on the ballast, Cardiff and Penarth.

**ALYSSUM.** Seeds 2-4 in each cell. Filament toothed at base. Hairs of L. stellate.

**A. CALYCINUM.** Alyssum. *Cyddlin.* L. lanceolate. Pod round. Fl. yellowish. Herb. June. On ballast. Frequent. Penarth, &c.

**DRABA.** Seeds many in each cell. Filaments entire.

**D. VERNA.** Early Whitlow Grass. *Llys y bystwm.* Petals cleft. Leaves all radical. Pod elliptic. Fl. white. Herb. Not common. On walls at Roath, Coedriglan.

*Pod many times longer than broad.*

**RAPHANUS.** Pod, when ripe, separating in joints. Leaves rough, not fleshy.

**R. RAPHANISTRUM.** Radish. *Rhuddygl neu Heddig gwilt, Bysed yr iar.* Beak longer than pod. L. lyrate. Fl. white or yellowish. Herb. June. Frequent. Llandaff, Whitchurch, &c.

**R. MARITIMUS.** Sea Radish. Beak shorter than pod. Fl. yellow. Herb. June. Rare. Penarth, Aberthaw.

*Pod with a longitudinal septum, seeds in a single row.*

**ERYSIMUM.** Stig. nearly simple. Pod 4-angled.

**E. CHIERANTHOIDES.** Treacle Mustard. L. lanceolate. Fl. small, yellow. Herb. June. Rare. On ballast. Penarth.

**E. ORIENTALE.** Hare's Ear Treacle Mustard. L. cordate oval, clasping. Fl. cream. Herb. June. Ballast. Common. Cardiff, Penarth, &c.

**CHIERANTHUS.** Stig. 2-lobed, lobes spreading. Pod compressed, 2-edged.

C. CHERI. Wallflower. *Melyn y gauaf, Murwyll*. L. lanceolate, acute. Stem woody below. Fl. yellow. Shrubby. April. Walls. Frequent. Cardiff Castle, Llandaff, Peterstone, &c.

HESPERIS. Stig. 2-lobed, lobes erect.

H. MATRONALIS. Dame's Violet. *Disawr*. St. erect. L. ovate-lanceolate, toothed, hairy. Fl. pale purple. Herb. May. Not common. Near Cardiff, St. Nicholas, Bolston, Ewenny Bridge, &c.

SINAPIS. Sep. spreading. Valves of pod 3-5 nerved, beak stout conical.

S. ALBA. White Mustard. *Cedu, neu Mwstardd gwyn*. Beak longer than pod, stout sword-shaped flattened, pod bristly. L. lyrate. Fl. yellow. Herb. June. Fields rare. Penarth, Southerndown.

S. NIGRA. Black Mustard. *Cedu du, neu Mwstardd cyffredin*. Beak shorter than the smooth 4-angled pod which is pressed flat to the pedicel. L. lyrate. Fl. yellow. Herb. June. Frequent. Cardiff, Barry, &c.

S. ARVENSIS. Charlock. *Cedu gwilt, Cedu, neu Ysnaib yr yd, Cadafarth*. Beak shorter than the spreading, knotty pod. L. rough. Fl. yellow. Herb. June. Everywhere. Common.

BRASSICA. Sep. erect. Valves of pod 1-nerved. Pod with a stout, conical beak.

B. CAMPESTRIS. Wild Navew. Upper L. clasping. Lower L. lyrate rough. Fl. yellow. Herb. June. Fields. Common.

B. NAPUS. Turnip, Rape. *Bresych yr yd, Erfinon*. Upper L. clasping, lower L. lyrate, glabrous. Fl. yellow. Herb. June. Fields. Frequent. Llandaff, &c.

B. OLERACEÆ. Wild Cabbage. *Bresych, Abaits*. Upper L. not clasping, thick, fleshy and glaucous. Lower L. lyrate. Fl. pale yellow. Herb. May. Seacliffs, Barry to Southerndown.

B. MONENSIS. Isle of Man Cabbage. *Berwr Mon, A Manaw*. L. pinnatifid not clasping. Fl. pale yellow. Herb. Summer. Not Common. Aberthaw. On ballast. Frequent.

SISYMBRIUM. Pod not beaked, narrow. Leaves divided.

S. THALIANUM. Thale Cress. *Berfain cyffredin*. Pod 4-angled. L. oblong, slightly toothed, mostly radical, hairy. Fl. white. Herb. April. Common. Penylan, St. Fagan's, Penarth, &c.

S. OFFICINALE. Hedge Mustard. *Arfog Meddygawl*. L. runcinate. Stem rigid, branched. Pods adpressed. Fl. yellow. Herb. June. Common. Everywhere.

S. POLYCERATUM. L. sinuate-runcinate. Pedicels in threes, very short, axillary. Fl. yellow. Herb. Frequent on the ballast hills.

S. IRIO. London Rocket. *Berwr Caersalem*. L. runcinate. Fl. yellow, in racemes. Herb. Common on ballast.

S. SOPHIA. Flix Weed. *Piblys, Berwr y fam*. L. bi-tripinnate; lfts. linear. Fl. small greenish-yellow, in racemes. Herb. June. On ballast. Frequent.

ALLIARIA. Pod not beaked. Leaves entire.

A. OFFICINALIS. Jack-by-the-Hedge. *Garllegog, Arfog arllegog, Troed yr asen*. L. cordate, crenate, stalked, smelling of garlic. Fl. white. Herb. Common. Penylan, Penarth, &c.

ARABIS. Pod nerved, compressed, 2-edged.

A. HIRSUTA. Hairy Wall Cress. *Twrged blewog, Berwr y cerrig*. Pods erect in fruit. Stem and L. clasping, hairy. Fl. white. Herb. June. Rare. Near Llanblethian, North Road, Cardiff.

CARDAMINE. Pod nerveless, compressed. Leaves pinnate.

C. HIRSUTA. Hairy Bitter Cress. *Berwyr y Meusydd, Hydyf blewog*. Lfts. of root-L. roundish, terminal one larger. Fl. small, white. Stamens 4. Herb. April. Common. Everywhere.

C. IMPATIENS. Narrow-leaved Lady's Smock. Leaves with stipules. Lfts. lanceolate, cut. Stamens 4 long and 2 short. Fl. white. Herb. Rare. Coed Cymmer, Quaker's Yard.

C. SYLVATICA. Wood Cardamine. L. without stipules. Lfts. of lower L. roundish, unequal-sided. Fl. small white. Stamens 4 long and 2 short. Herb. June. Common. Penylan, Llandaff, &c.

C. PRATENSIS. Lady's Smock. *Blodau'r y gog, Hydyf y waun, Blodenyn y gog*. L. without stipules. Lfts. of lower L. roundish, of upper L. linear. Flower large, lilac. Herb. May. Common.

BARBAREA. Pod 4-angled. Stig. entire.

B. VULGARIS. Yellow Rocket. *Berwyr y gauaf*. Lower L. lyrate, upper toothed, not cleft. Fl. yellow. Herb. May. Frequent. Penylan, Llanishen, &c.

B. PRÆCOX. Early Winter Cress. Lower L. lyrate, upper pinnatifid. Segments all linear. Fl. yellow. Herb. April. Frequent on ballast at Cardiff and Penarth.

NASTURTIUM. Pod terete, ribless, with no beak, or a very slight one. Seeds regularly 2-rowed.

N. OFFICINALE. Water Cress. *Berwyr y dwr, Berwyr y ffynnonau*. L. pinnate. Lfts. roundish or ovate. Fl. white. Herb. May. Frequent. Leckwith, Ely, &c.

N. SYLVESTRE. Creeping Yellow Cress. *Berwyr Melyn, Blyny-ddawl y dwr*. Petals twice as long as sepals. L. pinnatifid. Lfts. lanceolate. Fl. yellow. Herb. June. Common. Ely, Leckwith, &c.

N. PALUSTRE. Small Flowered Yellow Cress. *Berwyr Melyn, Blyny-ddawl y dwr*. Petals equal to sepals. L. pinnatifid. Lower L. lyrate. Fl. yellow. Herb. June. Common. Ely, St. Fagan's, &c.

DIPILOTAXIS. Pod 1-nerved, strongly beaked. Seeds regularly 2-rowed.

D. TENUIFOLIA. Wall Mustard. Stem branched, woody below. Fl. yellow. Herb. July. Frequent. Penarth, &c.

D. MURALIS. Sand Mustard. Stem simple. Leaves mostly radical. Fl. yellow. Herb. July. Frequent with the last.

## 7.—RESEDACEÆ.

RESEDA. Ovary 3-4 lobed. Capsule 1-celled, gaping.

R. LUTEOLA. Dyer's Weed. *Weld, Melyngu, Cynffon tittw*. L. linear or lanceolate, entire. Sep. 4. Pet. 4 or 5, deeply cleft. Fl. yellow. Herb. July. Common, Ely, Caerphilly, Pwllpant, &c.

R. LUTEA. Wild Mignonette. L. tri. or pinnatifid. Sep. 6. Pet. 6, very irregular. Fl. yellowish. Herb. July. Frequent. Ely, Caerphilly, &c.

**R. ALBA.** **Wild Mignonette.** *L.* all pinnatifid. Sepals 5-6. Pet. 5-6 trifid, nearly equal. Fl. white. Shrubby. Below St. Hilary. Rare. On ballast.

#### 8.—CISTACEÆ.

**HELIANTHEMUM.** Sepals 5, 3 inner large, 2 outer smaller.

**H. VULGARE.** **Rock Rose.** *Cor-rosyn cyffredin.* Decumbent leaves stipulate, oblong, flat, green above, hoary beneath. Fl. yellow. Shrub. July. Frequent. Sully to Southerdown.

**H. CANUM.** Glamorganshire; where, or on whose authority not known.

#### 9.—VIOLACEÆ.

**VIOLA.** Sepals 5. Petals 5. One spurred.

**V. HIRTA.** **Hairy Violet.** *Gwilydd flewog.* Stemless. *L.* cordate, oblong, or cordate, hairy, bracts, below middle of scape. Sep. obtuse. Fl. blue. Herb. April. Frequent. Llanishen, Sully, Barry, &c.

**V. ODORATA.** **Sweet Violet.** *Millyn gwyn, Crinnlys.* *L.* cordate. Stem with creeping runners. Bracts above middle of scape. Stigma hooked. Fl. white, blue, or purple, scented. Herb. April. Frequent all over the district.

**V. PALUSTRIS.** **Marsh Violet.** *Gwilydd y gors.* Leaves reniform, glabrous. Spur very short. Stigma broad, oblique. Fl. lilac. Herb. April. Frequent in bogs. Llanishen, Duffryn ffrwd, &c.

**V. CANINA.** **Dog Violet.** *Fiolydd y cwn, Fiolydd y neidr.* *L.* long, petioled, ovate-cordate to oblong lanceolate. Stipules small, narrow, toothed or ciliate. Style hooked. Fruiting peduncles, erect. Fl. blue, lilac, grey, or white. Common in the district.

*Var. SYLVATICA.* In the hilly district, Caerphilly to Merthyr.

*Var. STAGNINA.* Caerphilly Common.

*Var. FLAVICORNIS.* Llanishen, St. Fagan's, &c.

**V. TRICOLOR.** **Pansy.** *Trilliw, Fioled dauwynebog, Llys y drindod.* Stipules large leaf-like, much cut. Style club-shaped. Lower *L.* ovate crenate. Fl. blue and yellow. Herb. Frequent. St. Fagan's, Ely, &c.

**V. LUTEA.** **Mountain Pansy.** Like the last species, but stem more slender and wiry, and flower larger, yellow and purple. Herb. July. Rare. Ystrad and near Llyn Vach.

#### 10.—DROSERACEÆ.

**DROSERA.** Sep. 5. Petals 5.

**D. ROTUNDFOLIA.** **Round-leaved Sundew.** *Tawddrudd crynndail, Toddaiidd rudd, neu Toddaiidd crynndail.* Leaves circular, petiole and leaves with glandular hairs. Fl. white. Herb. July. Frequent. Llanishen, Caerphilly, Pontypridd, &c.

**D. INTERMEDIA.** **Long-leaved Sundew.** *Tawddrudd hirddail, Gwithlys hirddail.* *L.* oblong, with glandular hairs, petiole glabrous. Herb. July. Rare. Near Llangonoyd, Blaen y cwm.

#### 11.—POLYGALACEÆ.

**POLYGALA.** Sepals 5, 3 outer small, 2 inner larger, coloured. Fl. in racemes.

**P. VULGARIS.** **Milkwort.** *Llys Crist, Amlaethai.* *L.* scattered, oval below to lanceolate above. Petals variable in number, the lower keel-shaped, crowned with a crested appendage. Fl. blue, pink, or white. Herb. July. Common. Penylan, Llandaff, Ely, &c.

## 12.—CARYOPHYLLACEÆ.

*Calyx monosepalous, toothed. Petals 5, with a claw.*

**DIANTHUS.** Calyx with bracts at base. L. narrow. Styles 2.

**D. CARYOPHYLLUS.** Clove Pink. Wall at Cardiff Castle, *Dr. Turton*. Now extinct.

**D. DELTOIDES.** Maiden Pink. Petals triangularly toothed, Bracts of cal. awned. Fl. pale rose. Herb. Very rare. Rhymney Ry. Bank near Lanishen.

**SAPONARIA.** Calyx without bracts at base. L. ovate. Styles 2.

**S. OFFICINALIS.** Soapwort. *Sebonllys meddygawl*. L. ovate or oval, 3-5 ribbed, glabrous. Flowers flesh-coloured, in corymbs. Herb. August. Frequent in the Taff, Rumney to Ely Valleys.

**SILENE.** Calyx tubular or inflated. Capsule 3-celled below the middle. Styles 3.

**S. INFLATA.** Bladder Campion. *Glydllys codrwith, Lllys y poer, Menyg y gog*. L. ovate to lanceolate. Panicle. Many flowered. Fl. mostly drooping, white. Petals not crowned. Herb. June. Common. Cardiff, Llandaff, Penarth, &c.

**S. MARITIMA.** Sea Campion. *Glydllys arfor, Gwlydd y geifr*. L. lanceolate. St. decumbent. Fl. white, erect. Pet. crowned. Herb. June. Frequent. Shores Penarth to Southerndown.

**S. CONICA.** Cal. conical about 30-ribbed. L. ovate to lanceolate. Fl. red. Herb. Frequent on Cardiff and Penarth Ballast.

**S. ANGLICA.** English Catchfly. *Gladlys brutanaidd*. Fl. axillary, solitary. Pet. white. Stem branched. Herb. July. Rare. Gabalfa. Frequent on ballast.

**S. OTOITES.** Spanish Catchfly. Plentiful on ballast.

**LYCHNIS.** Styles 5. Capsule 1-5 celled.

**L. GITHAGO.** Corn Cockle. *Bulwag Rhufain, Gith*. L. linear-lanceolate, hairy. Flowers purple, solitary. Calyx much longer than petals. Herb. June. Frequent. Penarth, Sully, &c.

**L. VESPERTINA.** Night Flowering Campion. *Amrywiaeth gwynflodeuog*. Fl. dioecious, white, fragrant. Pet. crowned. L. ov.-lanceolate. Caps. oval. Herb. June. Frequent. Near Cardiff, Penarth, &c.

**L. DIURNA.** Red Campion. *Llys yr ychen, Lluglys ysgar, A. Blodeuyn rhudd*. Fl. dioecious, red. Pet. crowned. L. ov. Caps. globose. Herb. May. Common. Everywhere in district.

**L. FLOSCUCULI.** Ragged Robin. *Blodau'r frau, Blodeuyn y fran*. Flowers rose coloured, perfect. Petals 4-fid. Segments linear. L. lanceolate. Caps. 1-celled. Herb. June. Common in wet places.

*Sepals distinct. Styles 2 or 3.*

**HONKENEYA.** Stamens 10 alternate with 10 glands. Styles sometimes 5.

**H. PEPOIDES.** Sea Purslane. *Tywodwylydd arfor*. L. oval, sessile, fleshy. Stem forked, procumbent. Fl. white. Herb. June. Common. Coast, Sully to Southerndown.

*Petals entire.*

**MÖHRINGIA.** Petals 5. L. ovate thin, 3-nerved.



**M. TRINERVIS.** Three Nerved Sandwort. *Tywodwlydd llyriad-ddail*. Sepals longer than the white petals. Herb. May. Common. Penylan, Ely, St. Fagan's, &c.

**ARENARIA.** Petals 5. Capsule with 6 membranous teeth.

**A. SERPYLLIFOLIA.** Thyme-leaved Sandwort. *Tywodwlydd grywdail*. Sepals longer than petals. Leaves very small, ovate, acute. Fl. white. Herb. Frequent. Dean Farm Wall, Llandaff, &c.

**ALSINE.** Petals 5. Capsules with 3 teeth, leaves linear.

**A. MARINA.** Sea Sandwort. *Tywodwlydd y morgreigiau*. L. linear, fleshy, blunt. Seeds roundish, bordered. Ped. much longer than capsule. Fl. pale purple. Herb. Frequent. Coast, Penarth, Barry, &c.

**A. RUBRA.** Purple Sandwort. *Tywodwlydd glasrudd*. L. flat, bristle-pointed. Seeds not bordered. Peduncle scarcely longer than caps. Fl. pale purple. Herb. Frequent. About Docks, Penarth, &c.

**A. TENUIFOLIA.** Fine-leaved Sandwort. *Tywodwlydd meindwf*. Fl. many, panicked, white. Petals shorter than calyx. L. narrow, acute. Herb. June. Frequent on ballast hills.

**STELLARIA.** Stamens 10 (rarely 3 or 5), petals deeply cleft.

**S. MEDIA.** Chickweed. *Gwlydd y cywion, Tafod yr edn canolig, Brechlys*. Stem with an alternate line of hairs. L. ovate, stalked. Pet. not longer than sep. Stamens 3-10. Fl. white. Herb. Common. Everywhere.

**S. NEMORUM.** Wood Stitchwort. Stam 10. L. large cordate. Pet. longer than stem. Stem downy all round. Fl. white. Herb. Rare. Near Copper Works, Cardiff.

**S. HOLOSTEA.** Great Stitchwort. *Bara can a llaeth, Tafod yr edn mwyaf*. Pet. white, much longer than calyx. L. lanceolate, edges rough. Stem 4-angled, edges rough. Bracts leafy. Herb. April. Common in most hedges.

**S. GLAUCA.** Glaucous Stitchwort. *Tafod yr edn llydlas*. Stem 4-angled, smooth. Sep. 3-nerved. Bracts membranous at edge. Pet. white, longer than calyx. Herb. May. Common in wet places. Llanishen, &c.

**S. GRAMINEA.** Lesser Stitchwort. *Tafod yr edn lleiaf*. L. grass-like. Stem 4-angled. Pet. white, equal to sepals. Bracts fringed. Herb. May. Common. Penarth, &c.

**S. ULIGINOSA.** Bog Stitchwort. *Tafod yr edn y gors*. Stem 4-angled. Pet. white, shorter than cal. Bracts not fringed. L. ovate-lanceolate. Herb. May. Common. Llanishen, Caerphilly, &c.

**SAGINA.** Styles 4. Petals entire or none. Sepals 4. Capsule 4-valved. Stipules none.

**S. PROCUMBENS.** Procumbent Pearlwort. *Corwlyddyn gorweddawl*. Branches procumbent. L. bristle-tipped. Sep. obtuse. Fl. greenish white. Herb. Common. Roath, Penylan, &c.

**S. APETALA.** Annual Pearlwort. *Corwlyddyn anaf-flodeuog*. Leaves obtuse. Peduncle and sep. more or less glandular, hairy. Petals 0. Fl. greenish. Herb. May. Not common. Cooper's Fields, &c.

**S. MARITIMA.** Sea Pearlwort. *Corwlyddyn arfor*. Leaves obtuse, glabrous. Fl. white. Herb. May. Sea-coast. Common. Sully, Barry, &c.

**MCENCHIA.** Sep. 4, membranous at margin. Stamens 4. Capsule opening with 8 teeth.

**M. ERECTA.** Least Stitchwort. *Corwlyddyn syth*. Erect. L. opposite linear-lanceolate. Sep. acute. Fl. white. Herb. Rare. E. Moors.

**SPERGULA.** Sep. 5. Stam. 5-10 without glands. Pistils 5. Petals entire.

**S. ARVENSIS.** **Corn Spurrey.** *Troellig yr yd. Troellig mwyaf, Cedor y wrach.* L. linear, whorled. Ped. reflexed in fruit. Fl. white. Herb. Common. Penarth, St. Fagan's, &c.

**S. NODOSA.** **Knotted Spurrey.** *Troellig clymmog.* Petals entire, longer than sep. L. opposite, subulate, glabrous, upper L. short, tufted. Fl. white, rather large. Herb. Rare. Caerphilly Common, Taff's Well.

**CERASTIUM.** Petals cleft. Capsule tubular, 10-toothed.

**C. ARVENSE.** **Field Mouse-ear Chickweed.** Petals longer than calyx. L. linear-lanceolate. Fl. white. Herb. Frequent. Penarth, Dinas Powis, &c.

**C. GLOMERATUM.** **Broad-leaved Mouse-ear Chickweed.** *Cornwlyddyn, neu Clust llygoden llydanddail.* L. oval. Petals about equal to sepals. Stam. 10, peduncle shorter than flowers. Fl. white. Herb. Common. June. Penylan, Roath, &c.

**C. TRIVIALE.** **Narrow-leaved Mouse-ear Chickweed.** *Corn-wlyddyn, neu Clust llygoden culddail.* L. oblong-lanceolate. Fl. white in small terminal panicles. Ped. as long, or longer than the flowers. Herb. June. Common. Sophia Gardens, Cooper's Fields, &c.

**C. SEMIDECANDRUM.** **Small Mouse-ear Chickweed.** *Corn-wlyddyn, neu Clust llygoden corriadd blodauddail gwahanedig.* Pet. white, shorter than calyx. Stam. 5. L. ovate. Herb. March. Frequent. Penarth, Llandaff, &c.

**C. TETRANDRUM.** **Tetandrous Mouse-ear Chickweed.** *Corn-wlyddyn, neu Clust llygoden pedwar gwrryw.* Pet. shorter than cal. Stam. 5. L. oval. Coast, Sully Barry, &c.

### 13.—LINACEÆ.

**LINUM.** Sep., pet., stam., and pist., 5 each.

**L. CATHARTICUM.** **Purging Flax.** *Llin y tylwyth teg.* L. opposite, ovate-lanceolate. Stem repeatedly forked. Fl. white. Herb. June. Common. Penylan, Penarth, Llandaff, &c.

**L. UTRICULATISSIMUM.** **Common Flax.** *Llin cyffredin.* L. alternate or irregular lanceolate. Sep. ovate, acute, fringed. Fl. blue. Herb. Frequent in waste ground. Cardiff, Penarth, &c.

**L. ANGUSTIFOLIUM.** **Narrow-leaved Flax.** *Llin culddail.* Stem branched. L. linear, irregular. Sep. elliptic acuminate, fringed. Fl. blue. Herb. Rare. Swanbridge, Colhugh, Barry, &c.

**RADIOLA.** Sep., pet., stam., and pist. 4 each.

**R. MILLEGRANA.** **Allseed.** *Gorhadawg.* Stem repeatedly forked, 1-2 inches high. L. ovate, opposite, sessile. Fl. white. Herb. Rare. E. Moors, and near St. Bride's Major.

### 14.—MALVACEÆ.

**MALVA.** Epicalyx or involucre of 3 bracts.

**M. MOSCHATA.** **Musk Mallow.** *Hocys mws, Llys Simwnt.* St.-L. deeply cut into pinnatifid lobes, segments linear. Fl. large, rose colour. Herb. Frequent. Barry, Porthkerry, Llandaff, Lystalybont.

**M. SYLVESTRIS.** **Common Mallow.** *Hocys, Meddalai, Melottai, Glyf cyffredin.* L. roundish reniform, 5-7 lobed, lobes crenate. Ped. erect in fruit. Fl. large purple. Herb. Common. Llandaff, Ely, St. Fagan's, &c.

**M. ROTUNDIFOLIA.** Dwarf Mallow. *Hoccys bychan, Hoccys crynddail.* L. roundish-cordate, slightly lobed, crenate. Ped. deflexed in fruit. Flower quarter size of last species, pale lilac. Herb. Rare. Flemingstone and St. Athan.

**LAVATERA.** Epicalyx or involucre, 9-lobed.

**L. ARBOREA.** Tree Mallow. *Mor Hoccysen, Hoccys wydden.* L. 7-angled, plaited, velvety. Fl. large purplish rose. Shrubby. Rare. Steep Holme. Common.

**ALTHÆA.** Epicalyx or involucre, 6-9 fid.

**A. OFFICINALIS.** Marsh Mallow. *Hoccys morfa, Mor Hoccys, Malw-yr-hel, Hoccys y gors.* L. velvety. Ped. many flowered. Flowers, pale rose. Herb. Not common. Hayes Wood, Sully, Barry Island. Plentiful.

**A. HIRSUTA.** Hairy Marsh Mallow. L. rough, hairy. Ped. 1-flowered. Fl. pale purple. Shrubby. Rare. East Moors.

#### 15.—TILIACEÆ.

**TILIA.** Ovary 5-celled. Fruit 1-celled. Pistil 1. Leaves cordate.

**T. EUROPEA.** Lime or Linden Tree. *Pisgwydden, Gwaglwysfen.* L. cordate on long petiole. Fr. nearly glabrous, leathery. Tree. Only where planted. St. Fagan's, &c.

#### 16.—HYPERICACEÆ.

**HYPERICUM.** Sepals 5. Petals 5. Leaves entire.

**H. CALYGINUM.** Large-flowered St. John's Wort. Fl. solitary, large, yellow. Styles 5. Herb. Very rare. Near Penttyrch Forge.

*Styles 3. Sepals broad, unequal.*

**H. ANDROSÆMUM.** Tutsan. *Creulys bendiged, llys perfigedd, Dail y twrch, Gwaed y gwyr.* Stam. much longer than styles. L. cordate-ovate sessile, cymes few flowered. Fl. yellow. Berry purple. Herb. Frequent. St. Fagan's, Dynas Powis, &c.

*Styles 3. Sepals nearly equal.*

**H. QUADRANGULUM.** Square-stalked St. John's Wort. *Erinllys pedrongl.* Stem square, edges winged. Sep. nearly equal, erect lanceolate, acute. L. oval, with pellucid dots. Fl. yellow. Herb. Frequent. Cogan, Sully, Pwllypant, Caerphilly, &c.

**H. DUBIUM.** Imperforate St. John's Wort. *Godwyllon, Erinllys Mawr.* Stem 4-angled, not winged. L. ovate, with pellucid veins, but few dots. Fl. yellow. Herb. Frequent. St. Fagan's, Llandaff, &c.

**H. PERFORATUM.** Perforated St. John's Wort. *Candoll, Erinllys trydwill.* Stem 2-angled, not winged. L. oval to linear with many pellucid dots. Fl. yellow. Herb. Frequent. Penarth, Ely, St. Fagan's, &c.

**H. HUMIFUSUM.** Trailing St. John's Wort. *Erinllys man ymacnawll.* Stem round, prostrate. Leaves oval, glabrous. Fl. yellow. Herb. Frequent. Castle Grounds, Sophia Gardens, &c.

**H. ELODES.** Marsh St. John's Wort. *Erinllys y gors.* Stem round, ascending hairy. L. roundish-oval, hairy. Sep. ovate, obtuse. Fl. yellow. Herb. Not common. Near Pontypridd, Caerphilly, Penylan, &c.

**H. HIRSUTUM.** Hairy St. John's Wort. Stem erect. L. ovate or oblong, hairy. Sep. lanceolate, acute. Fl. yellow. Herb. Rare. Cooper's Fields.

**H. PULCHRUM:** Upright St. John's Wort. *Erinllys man syth*. Stem erect, glabrous. L. cordate, sessile, clasping. Sep. ovate. Fl. yellow. Herb. Common. Penarth, St. Fagan's, Pwllpant, &c.

## 17.—ACERACEÆ.

**ACER.** Flowers polygamous. Calyx 5-fid. Petals 5. Stam. 8.

**A. CAMPESTRE.** Field Maple. *Masarnwydd lleiaf, Cynhowlen*. L. 5-lobed, nearly entire. Fl. greenish, erect in corymbose racemes. Tree. Hedges. Common. Leckwith, Llandaff, &c. Frequently planted.

**A. PSEUDO-PLATANUS.** Sycamore. *Masarnwydd mwyaŷ, Masarn*. L. 5-lobed, serrate. Fl. greenish, in drooping racemes. Tree. Frequently planted.

## 18.—GERANIACEÆ.

**ERODIUM.** Stam. 5 perfect, 5 imperfect. Awns of carpel bearded.

**E. MARITIMUM.** Sea Stork's Bill. *Pig y Creyr arfor*. L. cordate-ovate, toothed or lobed, peduncle 1-2 flowered. Pet. minute, red, sometimes absent. Herb. June. Frequent. Steep Holmes, Barry, Southerndown, St. Donat's.

**E. MOSCHATUM.** Musky Stork's Bill. *Pig y Creyr mwsgaid*. L. pinnate. Lfts. ov., irregularly cut. Ped. several flowered. Fl. rose. Stip. ovate. Herb. Rare. On the ballast only.

**E. CICUTARIUM.** Hemlock Stork's Bill. *Pig y Creyr cegidaidd*. L. pinnate. Lfts. pinnatifid. Ped. several flowered. Stip. lanceolate. Fl. rose. Herb. Common. Llandaff, Penarth, Sully, Barry, &c.

**GERANIUM.** Stam. 10 (in one species 5), awns of carpel not bearded.

**G. STRIATUM.** Cooper's Fields. Planted.

**G. SANGUINEUM.** Bloody Crane's Bill. *Pig yr aran ruddgoch*. L. deeply 5-7 fid. Lobes 3-5 fid. Stem spreading. Ped. 1-flowered. Fl. large, purple red. Herb. Very Rare. Near Dunraven.

*Peduncles 2-flowered. Sepals awned.*

**G. DISSECTUM.** Cut-leaved Crane's Bill. *Pig yr aran llarpiog*. Pet. as long as calyx, cleft, rose-coloured. L. 5-7 lobed. Lobes cut into linear segments. Ped short. Herb. May. Common everywhere.

**G. COLUMBINUM.** Long-stalked Crane's Bill. *Pig yr aran hirgoesog*. Pet. as long as the calyx, notched, with a tooth in the notch, purplish rose. Ped. very long. Lobes of L. cut into linear segment. Herb. Not common. Sully, Swanbridge, St. Athan, &c.

**G. ROTUNDIFOLIUM.** Round-leaved Crane's Bill. Pet. entire, as long as the cal. L. 5-7 lobed. Plant downy. Herb. June. Common. Near Cardiff, Penarth ferry, E. Moors.

**G. ROBERTIANUM.** Stinking Crane's Bill. Herb Robert. *Pig yr aran troedrudd, Llŷs y llwnog*. L. ternate, lfts. pinnatifid or bi-pinnatifid. Pet. longer than sep., nearly entire. Rose and white. Herb. June. Common. Penylan, Penarth, &c.

**G. SYLVATICUM.** Wood Crane's Bill. *Pig yr aran geodwig*. L. deeply 3-7 lobed, lobes deeply cut and serrate. Fl. large, purple blue. Pet. notched, much longer than sep. Ped. erect in fruit. Herb. June. Rare. Courtyrala, Coedriglan, near Lanmaes.

G. PRATENSE. Meadow Crane's Bill. *Pig yr aran weirgtawdd*. L. deeply 5-7 lobed, lobes cut and serrate. Fl. large, blue. Pet. entire, much longer than sep. Ped. deflexed in fruit. Herb. Frequent. St. John's Churchyard, Blackweir, Sully, &c.

G. PHŒUM. Dusky Crane's Bill. L. 5-lobed, lobes cut and serrate. Ped. 2-flowered. Sep. not awned. Petals entire, blackish purple. Herb. June. Very rare. Cooper's Fields and Coedriglan.

G. LUCIDUM. Shining Crane's Bill. *Pig yr aran disclaer*. L. reniform, glabrous, shining, 5-lobed, lobes deeply crenate; cal. 5-angled, pyramidal wrinkled. Flower small. Pet. entire rose. Herb. May. Common. Penarth, Sully, St. Fagan's, &c.

G. PYRENICUM. Perennial Dove's Foot Crane's Bill. Pet. notched. L. roundish, lobed. Stem erect. Flowers rather large, purplish red. Herb. June. Rare. Penarth ferry, and East Moors.

G. PUSILLUM. Small Flowered Crane's Bill. *Pig yr aran manfodeuog*. Pet. notched, purple. Anthers 5. Carp. smooth. Stem prostrate. Herb. June. Frequent near New Cemetery, Penylan, &c.

G. MOLLE. Dove's Foot Crane's Bill. *Pig yr aran cyffredin*. Pet. notched, rose. Carpels wrinkled. L. roundish, lobed and downy. Herb. June. Very common. Everywhere.

#### 19. BALSAMINACÆ.

IMPATIENS. Sep. 4, 1-hooded and spurred. Pet. 2.

I. NOLI-ME-TANGERE. Yellow Balsam. *Ffromyls*. Ped. many flowered. Fl. yellow. Spur not notched. Herb. Very rare. Llandough Wood, near Cowbridge.

#### 20.—OXALIDACÆ.

OXALIS. Capsule 5-celled.

O. ACETOSELLA. Wood Sorrel. *Bara can a cwccw*, *Suran y coed gyffredin*, *Suran y gog*, *Suran tair dalen alcluya*. Stemless, rhizome with fleshy scales. Scape 1-flowered. Fl. white, with pink streaks. Herb. Common. Penylan, St. Fagan's, &c.

A purple variety, found at Llandaff by G. B. Hughes, M.A.

O. CORNICULATA. Yellow Procumbent Wood Sorrel. Stem branched, procumbent. Scape axillary, 2-4 flowered. Fl. small yellow. Pet. notched. Herb. Rare. Coedriglan, Southerndown and Sutton.

O. STRICTA. Glamorganshire. On whose authority not known (see "Babington's Manual.")

### EXOGENS—CALYCIFLORÆ.

#### 21.—CELASTRACÆ.

STAPHYLEA. Pet. 5. St. 5. L. pinnate.

S. PINNATA. Bladder Nut. *Daggrau Addaf*. Fl. yellowish, in racemes. Grows in Castle Coch Woods, but most probably planted.

EUONYMUS. Pet. and Stam. usually 4. L. simp e.

E. EUROPEUS. Spindle Tree. *Piswydden*, *y pren y crogodd Diawl y fam*. Branches 4-angled. L. ovate-lanceolate, serrate. Caps. 4-angled. Tree. June. Frequent. Penylan, Leckwith, St. Fagan's, Tongwynlais, Pencoed, &c.

22.—RHAMNACEÆ.

**RHAMNUS.** Calyx 4-5 fid. Pet. 4-5. Berry 2-4 celled.

**R. CATHARTICUS.** Buckthorn. *Rhafnwydden*. Branches thorny. Stam. 4. Tree. Fl. dioecious, greenish. L. oval, serrate. Flat Holmes. *Dr. Turton*.

**R. FRANGULA.** Alder Buckthorn. *Brauwydd*. Thornless. Stam. 5. Fl. perfect, greenish. L. elliptic, entire. Tree. May. Frequent. Whitchurch, Hensol, Pontypridd, &c.

23.—LEGUMINOSÆ.

*Stamens monadelphous.*

**ANTHYLLIS.** Fl. in close heads. Cal. inflated, woolly. L. pinnate.

**A. VULNERARIA.** Kidney Vetch, Ladies' Fingers. *Plucen felen, Meillionen felen*. Fl. in heads, yellow or orange. Bracts large. Herb. June. Frequent. Penarth, Sully, Pwllypant.

**ONONIS.** Calyx 5-fid. Segments narrow. Standard striated.

**O. ARVENSIS.** Restharrow. *Duglwyd, Hwŷ yr ychen, Cas gan arddwr, Tegwch Meinwen*. St. thornless. Pods shorter than cal. Flowers rose. L. ternate, upper L. simple. Herb. June. Frequent. Penarth, Sully, Pwllypant, &c.

**O. CAMPESTRIS.** Thorny Restharrow. Stem thorny. Pods longer than calyx. Flowers rose. L. ternate, upper L. simple. Herb. July. Rare. Cogan, Penarth, &c.

**ULEX.** Sep. 2, with 2 minute bracts at the base. Shrub thorny.

**U. EUROPEUS.** Furze, Whin. *Eithenen ffreinig*. Calyx downy. Fl. terminal and lateral, yellow. Shrub. February. Common. Penylan, Llandaff, &c.

**GENISTA.** Cal. 2-lipped, upper 2, lower 4-fid. L. simple. Style subulate. Stigma oblique.

**G. ANGLICA.** Needle Whin. *Cracheithenen, Eithenen yr iar*. Thorny. L. ovate or ovate-lanceolate. Pods inflated. Fl. yellow. Herb. Frequent. Lavernock, Barry, Lantwit Major, &c.

**G. TINCTORIA.** Dyer's Greenweed. *Banadlen aur, Melynog y waun, Llys melyn, Banadlos, Corfanadl*. Thornless. St. decumbent. Leaves lanceolate to ovate, glabrous. Pod glabrous. Flowers yellow in racemes. Shrubby. July. Common. Penarth, Sully, Barry, &c.

**SAROTHAMNUS.** Calyx 2-lipped, upper 2, lower 3-toothed. Style long. Stig. capitate. L. simple or ternate. Branches long, twigg.

**S. SCOPARIUM.** Broom. *Banadlen, Banhallen*. Fl. large, yellow, axillar, 1 or 2 together. Shrub. May. Common. Llandaff, Llanishen, Llanedarn.

*Stamens diadelphous.*

**MELILOTUS.** Pods short, 1-4 seeded. Fl. in racemes. Pet. distinct, deciduous.

**M. OFFICINALIS.** Common Melilot. *Gwydro Meillionen y ceirw*. Pod irregularly wrinkled, 2-seeded. L. ovate acute, hairy. Wings equal to standard and keel. Fl. yellow. Herb. July. Frequent. Penarth, East Moors, &c.

**M. ARVENSIS.** Field Melilot. Pod transversely wrinkled, oval, glabrous, obtuse, 1-seeded. Wings and standard yellow, longer than keel. Herb. June. Frequent on the ballast tips.

**M. VULGARIS.** White Melilot. Pod 1-seeded, smooth, oval. Fl. white. Herb. July. Rare. On the ballast.

**TRIFOLIUM.** L. trifoliate. Pods oval, about equal length with the calyx. Pet. somewhat united, persistent. Fl. in heads.

**T. FRAGIFERUM.** Strawberry-headed Trefoil. *Meillionen fefusaidd.* Stem creeping. Cal. inflated in fruit. Heads in fruit globose, on long ped. Fl. pale red, with an inv. of bracts as long as the cal. Herb. July. Not common. East Moors.

**T. RESUPINATUM.** Reversed Trefoil. Stem creeping. Calyx inflated in fruit; heads roundish, on a short ped. Bracts minute. Fl. crimson to white. Cor. reversed. Herb. Frequent. In waste places about Cardiff Docks, and ballast banks.

**T. GLOMERATUM.** Smooth round-headed Trefoil. Heads of fruit sessile. Calyx not inflated. Seeds 2 in each pod. Stem prostrate. Calyx teeth, broad, short, recurved in fruit. Fl. rose. Herb. On the ballast hills. Frequent.

**T. SUFFOCATUM.** Suffocated Trefoil. *Mellionen fygeidig.* Heads of fruit sessile. Calyx not inflated. Seeds 2 in each pod. Stem prostrate. Calyx teeth lanceolate. Reflexed heads crowded near the root. Fl. pink or white. Herb. June. Whitmore Bay, Barry, and on the ballast. Frequent.

**T. REPENS.** White Trefoil. *Millfeillionen, Meillionen wen y waun, Meillionen Olwen.* Stem hollow, creeping. Leaflets obovate or obcordate. Pod 2-4 seeded. Heads of Fl. white or reddish. Stalked calyx not inflated in fruit. Herb. June. Common in every meadow.

**T. PROCUMBENS.** Hop Trefoil. *Meillionen hoppysaidd.* Head 30-50 flowered, pods 1-seeded. Fl. yellow, persistent, deflexed, and brown in fruit. Herb. June. Everywhere common.

**T. MINUS.** Lesser Yellow Trefoil. *Meillionen felen fechan. Meillionen gwe felen.* Heads 8-20 flowered, pods 1-seeded. Fruit not so prominent as last species. Fl. yellow, small. Herb. June. Everywhere common.

**T. FILIFORME.** Slender Trefoil. *Meillionen felen eiddil.* Heads 2-5 flowered. Fl. yellow, very small. Standard notched, pod 1-seeded. Herb. June. Frequent. Penarth, Llandaff, &c.

**T. SUBTERRANEUM.** Subterraneous Trefoil. *Meillionen wen ymydd.* Heads of about 4 flowers, reddish, white, or cream-coloured, hairy; at first erect, then bent to the ground, usually buried in the sandy soil. May. Frequent on the ballast.

**T. ARVENSE.** Hare's Foot Trefoil. *Meillionen genedog, Troed yr ysgyfarnog.* Heads, many flowered, oval or oblong. Cor. very short, whitish. Cal. teeth bristly, lengthening to long hairs in fruit. June. Frequent on the ballast banks, and near Southerndown.

*Calyx about equal with corolla.*

**T. STELLATUM.** Starry-headed Trefoil. Calyx teeth large. Spreading in fr. Heads large, stalked, roundish. Fl. reddish. Herb. July. Very rare. On the ballast.

**T. SCABRUM.** Hard Knotty Trefoil. Calyx teeth lanceolate. Stiff spreading or reflexed in fr. Heads ovate, sessile. Stem prostrate. Fl. whitish. Herb. June. Rare. Near Rumney Bridge. On ballast, frequent.

**T. STRIATUM.** Soft Knotty Trefoil. *Meillionen rychog.* Stem prostrate or ascending. Heads, ovate, sessile, teeth not spreading, lft. obovate. Fl. whitish to pinkish. Herb. June. Very common. On ballast hills.

*Calyx shorter than corolla.*

**T. INCARNATUM.** Heads long, tapering, stalked. Calyx teeth equal. Stipules and leaves broad. Flowers very vivid crimson, rarely cream-colour. Herb. June. Rare. Fairwater, near Cowbridge, &c.

**T. PRATENSE.** **Red Clover.** *March feillionen, Meillionen goch.* Heads globose, sessile. Calyx with one tooth much larger than the others. Stipules and leaves broad. Fl. purple, red. Herb. Common everywhere.

**T. OCHROLEUCUM.** **Sulphur-coloured Trefoil.** Heads roundish, close. Cal. downy. L. narrow. Fl. cream colour. Herb. Rare. Only on the ballast banks.

**T. MEDIUM.** **Cow Clover.** *Meillionen wyrgam.* Heads roundish, lax. Cal. glabrous. Fl. purplish. Herb. June. Frequent. Llanishen, Sully, Penarth, &c.

**T. MARITIMUM.** **Teazel-headed Trefoil.** Heads roundish, close. Cal. teeth (after flowering) broad, stiff, acute, spreading. Fl. small, pale red. Herb. Not common. Rumney Moors, Pengam, East Moors, &c.

**MEDICAGO.** L. ternate. Pods curved or spirally coiled.

**M. LUPULINA.** **Black Medick.** *Maglys gwineuddu.* Lfts. obovate. Fl. yellow in oval heads. Pods small, kidney shaped, 1-seeded. Herb. May. Everywhere. Common.

**M. FALCATA.** **Sickle-Podded Medick.** Pod sickle-shaped, many-seeded. Stem decumbent. Fl. yellow. Racemes, many-flowered. Herb. Rare. Autumn. On ballast and waste ground, E. Moors and Penarth.

**M. SATIVA.** **Lucerne.** *Maglys rhuddlas.* Flowers in racemes, violet. Pods spiral of 2-3 turns, smooth, many-seeded. Herb. Railway banks and waste ground. Common.

**M. MINIMA.** **Little Bur Medick.** Racemes few-flowered, yellow. Pod coiled into a ball with 2 rows of short hooked spines. Stipules entire. Herb. Not common. About Cardiff, Penarth, Barry, &c.

**M. DENTICULATA.** **Reticulated Medick.** Racemes few-flowered, yellow. Pod loosely coiled, flattened, spines in two rows, mostly hooked. Stipules toothed. Herb. June. Rare. About Cardiff, Penarth, &c.

**M. MACULATA.** **Spotted Medick.** Racemes few-flowered, yellow. Pod loosely coiled, flattened, reticulated, with two rows of curved (not hooked) spines. Stipules toothed. Lfts. obcordate, each with a dark spot. Herb. June. Frequent. About Cardiff, Penarth, Barry, &c.

**LOTUS.** L. ternate. Pod long, straight, many-seeded. Keel of corolla beaked.

**L. CORNICULATUS.** **Bird's Foot Trefoil.** *Pysen y ceirw grythog.* Stem solid. Claw of standard broad. Umbel 3-10 flowered. Fl. yellow. Herb. May. Common.

**L. MAJOR.** **Great Bird's Foot Trefoil.** *Pysen y ceirw flewog.* Stem hollow. Claw of standard, linear. Umbel. 8-12 flowered. Fl. yellow. Herb. July. Frequent. Cardiff, Llanishen, St. Fagan's, &c.

**TRIGONELLA.** L. ternate. Pod oblong 6-8 seeded. Keel of cor. obtuse.

**T. ORNITHOPODIOIDES.** **Fenugreek.** *Corfeillionen wen.* Ped. axillar 1-3 flowered. Fl. yellowish-rose. Stem prostrate. July. Common on the ballast.

*L. pinnate.*

**ONOBRYCHIS.** Pod 1-celled, 1-seeded, strongly lined. L. with a terminal lft.



**O. SATIVA.** **Sainfoin.** *Codawg.* Fl. rose colour, in close axillary racemes, on long ped. L. with odd terminal lft. Herb. June. Not common. St. Fagan's, Llantwit Major, Boverton, &c.

**ASTRAGALUS.** Pod imperfectly 2-celled, many-seeded. Keel obtuse. Fl. in racemes.

**A. GLYCYPHYLLOS.** **Milk Vetch.** *Llaethwyg, Geuperwraidd.* L. 5-6 pairs and odd leaflet. Lfts. large, ovate. Fl. in close oval-stalked spikes, pale yellow. Herb. June. Rare. Barry.

**ORNITHOPUS.** Fl. in heads, pods jointed like a bird's claw, curved, a pinnate bract just below fl.

**O. PERPUSILLUS.** **Slender Bird's Foot.** *Troed yr aderyn cyffredin.* Stem prostrate. Ped 1-5 fld. Fl. white veined with red, small. Herb. Not common. Sully, Barry, and on the ballast common.

**ARTHROLOBIUM.** Fl. in heads. Pods lomentaceous.

**A. EBRACEATUM.** **Sand Joint Vetch.** Stem prostrate, thread-like. Ped. 2-5 flowered, no bract beneath fl. Fl. yellow. Herb. July. Rare. On the ballast only.

**VICIA.** Style filiform, bearded beneath stigma. Tube of stamens very obliquely truncate. L. pinnate, mostly with tendrils.

**V. LUTEA.** **Yellow Vetch.** Fl. axillary, solitary, yellow. Pods hairy. July. On the ballast only.

**V. SEPIUM.** **Bush Vetch.** *Ffugbysen y cloddiau.* Fl. axillary, nearly sessile, clustered 3-6 flowered. Lfts. 4-8 pairs, ovate, obtuse, mucronate. Cal. hairy. Fl. dull purple. Herb. May. Common. Ely, St. Fagan's, Penarth, &c.

**V. LATHYROIDES.** **Spring Vetch.** Fl. axillary, mostly solitary, small, pale purple. Lfts. half sagittate, entire. Herb. Frequent. Grangetown, Penarth, Roath, &c.

**V. SATIVA.** **Common Vetch.** *Ffugbysen maethawl.* Fl. solitary or in pairs, crimson. Pod glabrous. Stipules often spotted. Lfts. 4-8 pairs. Herb. Commonly cultivated.

**V. ANGUSTIFOLIA.** **Narrow-leaved Vetch.** Fl. solitary, deep crimson, nearly sessile. Lfts. 3-5 pairs, linear. Herb. June. Frequent. Rumney, Pengam, Penarth, St. Fagan's. Only distinguished from the last by size.

**V. TETRASPERMA.** **Smooth Tare.** *Corbysen lefn ronynog.* Ped. long, 1-4 flowered. Fl. pale blue. Pod glabrous, 3-4 seeded. Lfts. obtuse. Herb. June. Frequent. Cardiff, Penarth, St. Fagan's, &c.

**V. GRACILIS.** **Slender Tare.** Slenderer than the last species. Pod 6-8 seeded. Lfts. acute. Herb. June. On the ballast hills, and at Tondy and Maesteg.

**V. HIRSUTA.** **Hairy Tare.** *Corbysen flewog.* Ped. long, 2-5 flowered. Fl. small whitish, pod 2-seeded, hairy. Lfts. linear. Herb. June. Fields, everywhere.

**V. SYLVATICA.** **Wood Vetch.** *Ffugbysen y wyg.* Ped. long, many flowered. Fl. cream with purple lines. Lfts. 7 or more pairs, oval. Tendrils long. Stem climbing. Herb. July. Not common. Caerau, St. Fagan's, near Cadoxton, &c.

**V. CRACCA.** **Tufted Vetch.** *Tagwyg bysen.* Ped. long, many-flowered. Fl. bluish-purple, numerous, small, pendant. Stem climbing. Lfts. lanceolate. Herb. July. Common. Penylan, Llanedarn Road, Llanishen, &c.

**LATHYRUS.** Leaves mostly with tendrils, pinnate. No odd leaflet. Style dilated upwards. Tube of stamens, transversely truncate.

**L. APHACA.** **Leafless Vetchling.** Tendrils leafless. Stipules leaf-like, sagittate-cordate, large. Ped. 1-flowered. Fl. yellow, axillary. Herb. June. Waste ground and ballast heaps. Frequent. East Moors, Grangetown, Penarth, Cowbridge, Llantrissant, &c.

**L. NISSOLIA.** **Grass-leaved Vetchling.** Tendrils O. Stipules O. L. long, linear. Ped. 1-2 flowered. Fl. crimson. Herb. Lavernock, Swanbridge, Barry, &c.

**L. PRATENSIS.** **Yellow Vetchling.** *Ydbysen y waun.* L. pinnate, with 1 pair of lanceolate lfts. Stipules sagittate. Fl. yellow. Herb. June. Common. Penylan, Roath, Penarth, &c.

**L. SYLVESTRIS.** **Narrow-leaved Everlasting Pea.** *Ydbysen barhaus culldail.* L. with 1 pair of lanceolate lfts. Stipules half sagittate. Stem winged. Fl. variegated, with pale crimson, blue and green. Herb. Frequent. Sully, Penarth, St. Fagan's, &c.

**OROBUS.** L. with a herbaceous point in place of tendrils. Style linear, thickened upwards.

**O. TUBEROSUS.** **Heath Pea.** *Pysen y coed gnaphwrieddiawg.* Lfts. oblong 2-3 pairs. Stem simple winged, erect. Stipules half sagittate. Fl. 2-6 pale purple to crimson. Herb. July. Common. Penylan, Wedal, Llanishen, Pwllypant, &c.

#### 24.—ROSACEÆ.

**PRUNUS.** Stipules free. Calyx deciduous, free from ovary. Style 1. Fruit a drupe.

**P. COMMUNIS.** **Sloe.** *Ddraenen ddu, Eirin-berth.* A rigid bush, very spinous. Fl. white. Ped. 2 or 3 together, usually appearing before the leaves. Shrub. April. Common. Penarth, Dinas Powis, &c.

**P. INSITITIA.** **Bullace Tree.** *Eirenen Bulas.* Similar to last, but larger. Branches straighter and fewer spines. Fl. larger, white, expanding with the leaves. Shrub. May. Frequent. Dinas Powis, Duffryn Golwg, Pencoed, &c.

**P. CERASUS.** **Wild Cherry.** *Ceiriosen.* Fl. white in a sessile umbel. Shrub, with suckers from root. Fruit red. Rare. Near Taff's Well.

**P. AVIUM.** **Black Cherry.** *Neu Siriancu ddu.* Fl. white in a sessile umbel, Tree without suckers. Fruit black. Frequent. Llandaff, Penarth, Cwm George, Coedriglan, &c.

**P. PADUS.** **Bird Cherry.** Fl. whitish in pendulous racemes 3-5 inches long. Fr. nearly erect when ripe. A small, black drupe, with a rough astringent taste. Shrub, or small tree. Frequent. Barry, St. Hilary, Gigan Bridge, &c.

**SPIRÆA.** Fr. of several follicles. Cal. 5-fid. Stipules adnate. Fl. in panicles or racemes.

**S. ULMARIA.** **Meadow Sweet.** *Erwaint, Chwys Arthur, Meddlys.* L. interruptedly pinnate, white beneath. Lfts. irregularly toothed, terminal one 3-5 lobed. Fl. numerous, in a dense cluster, yellowish white. Herb. June. Common. In wet places.

**S. FILIPENDULA.** **Dropwort.** *Crogedyf.* L. mostly radical, interruptedly pinnate. Lfts. 12-20 or more, small, oblong, deeply toothed. Fl. fewer than last, white. Herb. Rare. Penarth, Heol-y-mynydd, near Ham.

**ALCHEMILLA.** Carpels enclosed within dried calyx tube. Pet. O. Cal. double 8-fid.

**A. VULGARIS.** *Lady's Mantle.* *Mantell Fair, Simmwr y cor, Palf neu Troed y llew.* L. roundish reniform plaited, lobed, serrate, lower on stalks. Fl. panicled, greenish yellow. Not common. Sophia Gardens, Cooper's Fields, Llandaff, &c.

**A. ARVENSIS.** *Parsley Piert.* *Troed y dryw.* L. 3-fid., toothed on short stalks. Fl. minute axillary, sessile, clustered. Fl. greenish. Herb. Frequent. Canton, Ely, St. Fagan's, &c.

**SANGUISORBA.** Petals 0. Leaves simply pinnate. Carpel enclosed in a dry cal. tube. Stam. 4. Stig. capitate.

**S. OFFICINALIS.** *Great Burnet.* *Llysuawg, Llysyrlys.* Heads of fl. oval or oblong. Lfts. cordate-ovate or oblong 4-6 pairs and a terminal one. Fl. purple-red. Herb. Not frequent. Cynon Valley, Pwllpant.

**POTERIUM.** Stam. 20-30. Stig. tufted. Fl. monœcious in heads. Leaves pinnate.

**P. SANGUISORBA.** *Lesser Salad Burnet.* *Gwyddlwdn, Gwyddlwyn.* Heads globose. Cal. in fruit reticulated (not prickly). Lfts. ovate, toothed, 4-9 pairs and terminal lft. Herb. Common. Everywhere. Penarth to Southerndown.

**AGRIMONIA.** Pet. 5. L. interruptedly pinnate. Fl. in spikes. Cal. with hooked bristles above.

**A. EUPATORIA.** *Common Agrimony.* *Tryw, Trydo, Caliwlyn y mel, Cwlyn y mel, Blaen y conyn ar y mel, Llys y fuddau.* Stem erect, 2-3 ft. high. Fl. yellow in elongated spikes. Fr. covered with hooked bristles. Herb. Frequent. Cogan, Leckwith, Lavernock, &c.

**GEUM.** Achene tipped with a jointed awn, when ripe receptacle dry. Cal. 10-cleft, outer or alternate segments minute.

**G. URBANUM.** *Common Avens.* *Mabgoll, Bendigeidlys, Llys Bened.* Fl. erect, yellow. Stip. large, broad. Root-L. interruptedly pinnate and lyrate. Stem-L. ternate. Herb. Common. Penylan, Leckwith, St. Fagan's, &c.

**G. RIVALE.** *Water Avens.* *Mabgoll glan y dwr.* Fl. drooping. Stipules small, ovate, toothed. Root-L. interruptedly pinnate, with small lfts., and a large broad terminal lobe, sometimes ternate. Fl. purplish. Herb. Damp places. Not common. Cwm George, Pontypridd, &c.

**RUBUS.** Calyx 5-cleft. Pet. 5. Fruit of several pulpy drupes, receptacle spongy.

**R. SAXATILIS.** *Stone Bramble.* Stem herbaceous. L. ternate. Barren stems rooting at the joints, flowering stems erect with few leaves. Fl. very small, white. Fr. of 1-4 bright red drupes. Very rare. Glyncorrwg, N.B.G.

*Stem woody.*

**R. IDÆUS.** *Raspberry.* *Afanllwyn, Mafonen, Mafon-llwyn.* Stem erect. L. pinnate, upper ternate, white beneath. Prickles weak. Fl. panicled, white. Shrub. Woods. Frequent. Heath, Llantrythid, Gigman, &c.

*Leaves quinate, rarely pinnate, not white beneath. Upper L. often ternate.*

**R. SUB-ERECTUS.** *Red Fruited Bramble.* Stem erect, glabrous, or nearly so, prickles chiefly confined to angles of stem. Fl. whitish pink. Shrub. Not common. Near Cefn On Tunnel, Pwllpant, &c.

**R. RHAMNIFOLIUS.** **Buckthorn-leaved Bramble.** Stem angular, arching, nearly glabrous, prickles uniform only on angles of stems, no glandular hairs. Fl. white or pink. Shrub. Not common. Whitechurch, Rhubina, near Blackcock.

**R. CORYLIFOLIUS.** **Hazel-leaved Bramble.** *Mwyarllywyn cullddail.* Stem round. L. pinnate or ternate. Lfts. roundish, hairy beneath. Stems with scattered prickles. Shrub. Commonest bramble in the district.

**R. CÆSIUS.** **Dewberry.** *Mywaren Mair, Mwyarllywyn glas.* Stem round, arched or prostrate, rather glaucous, prickles, weak, few. L. mostly ternate. Fl. white. Fr. with a bluish bloom. Shrub. Frequent. Barry Isle, St. Hilary, Llantwit, Llanmaes, &c.

**R. FRUTICOSUS.** **Common Bramble.** *Mwyaren ddu.* L. quinate, rarely ternate, white beneath. Stem arched. Hairs 0. Prickles strong hooked. Shrub. July. Common. Everywhere.

*The genus RUBUS has been broken up into from 5 to 80 species and sub-species according to the views taken by the different so-called "splitters or lumpers," but the foregoing are the clearest marked in character.*

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**FRAGARIA.** Cal. double. Achenes small, dry, receptacle pulpy.

**F. VESCA.** **Wild Strawberry.** *Mefusen y geodwig, Sifyn.* L. ternate. Hairs of leaf-stalks close pressed. Fl. white, erect. Fr. drooping, scarlet. Herb. Frequent. Hedge banks. Penylan, Coedygoras, near Drope.

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**COMARUM.** Receptacle spongy. Achenes dry. Calyx double.

**C. PALUSTRE.** **Marsh Cinquefoil.** *Llygad ysgyfarnog.* Lower L. pinnate. upper L. quinate or ternate. Lfts. lanceolate, serrate. Fl. purplish. Herb. Frequent. July. Llanishen Pond, Barry, Cowbridge, &c.

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**POTENTILLA.** Receptacle dry. Achenes dry. Stam. many.

**P. ANSERINA.** **Silverweed.** *Gwyn y merched, Tinllwyd, Llwyd y din.* L. interruptedly pinnate, silky beneath. Stem creeping, rooting. Ped. axillary 1-flowered. Fl. yellow. Herb. Common. Waste ground, Sophia Gardens, Penarth, &c.

**P. FRUTICOSA.** **Shrubby Cinquefoil.** In Castle Coch Woods. Certainly planted.

**P. FRAGARIASTRUM.** **Barren Strawberry.** *Coeg fefusen.* L. all ternate, hairy, silky, obovate, serrate. Flowers white, very like those of the strawberry. Herb. April. Common. Nearly every roadside.

**P. TORMENTILLA.** **Common Tormetil.** *Melyn y twynau, Tresgl y moch Ysgwas.* L. ternate or one quinate, not silky beneath. Fl. yellow. Stem procumbent. Herb. Common. Pontypridd Common, Caerphilly Common.

**P. REPTANS.** **Creeping Cinquefoil.** *Pumnaalen gyffredin, Tresgylmusgaidd.* Petals 5. Leaves nearly all quinate. Stem procumbent. Fl. yellow, three times larger than last species. Herb. Common. Ely, St. Fagan's, Leckwith, &c.

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**ROSÆ.** Pet. 5. Stam. many. Stipules adnate. Calyx tube thick and fleshy, forming when ripe a 1-5 celled fr.

**R. SPINOSISSIMA.** **Burnet Rose.** *Mwccog.* A shrub about 1 foot high, shoots crowded with prickles and bristles. Fruit globose, black when ripe. Lfts. small. Fl. white or yellowish. June. Sea coast. Frequent. Barry, Fontigary, Southerndown.

**R. RUBIGINOSA.** Sweet Briar. *Rhoslwyn per*. Prickles of the shoots, various in size, intermixed with straight and hooked bristles, and glandular hairs, which give out the strong sweet briar odour. Fl. pink. Shrub. June. Not common. Near Aberdare, Llangonoyd, Newhouse and Lisvane.

**R. TOMENTOSA.** Downy-leaved Rose. *Rhosyn lledwlanog*. Prickles nearly uniform, straight, glandular hairs, few or 0. L. hairy beneath. Fr. bristly. Fl. pink. Shrub. June. Not very common. Penylan Lane, St. Fagan's, Cynon Valley, Bridgend, &c.

**R. INODORO.** Slightly-scented Sweet Briar. Prickles all hooked, nearly uniform. Fr. smooth, oval or globose. Fl. pale pink. Shrub. June. Not common. Whitchurch, Greenmeadow, Bonvilstone.

**R. CANINA.** Dog Rose. *Ciros, Egroeswydd, Ogfaenllwyn, March-faren, Mieriffrenig*. Prickles uniform, hooked. Stem or leaves not glandular. Styles distinct. Fl. pink or white. Frequent. Penylan, Heath, Llanishen, &c.

**R. SURCULOSA.** Chiefly distinguished from the last species by the whole plant being more robust, flowers larger and more plentiful, and the leaves rather broader in outline. Shrub. Frequent near the coast line. Llantwit, Bridgend, &c.

**R. ARVENSIS.** Tailor's Briar. *Ciros gwyn*. Styles united into a column. Shoots trailing, feeble. Prickles uniform, feeble. Fl. white. Shrub. June. Cowbridge, near Cardiff, and Llandaff.

**R. SYSTYLA.** White Briar. Styles united into a column. Shoots strong, ascending. Prickles stout, hooked. Fl. pinkish, mostly white. Common. Penylan, St. Fagan's, Fairwater, Pontypridd, Aberdare.

**MESPILUS.** Fl. solitary, sessile. Petals large. Segments of calyx large, leafy.

**M. GERMANICA.** Medlar. Branches thorny. Fl. solitary, white. L. lanceolate. Tree. May. Very rare. Radyr. Ewenny Priory. Certainly planted, I believe.

**CRATÆGUS.** Segments of calyx small. Fl. in corymbs. Calyx tube thicker and fleshy, forming when ripe a 1-celled fruit.

**C. OXYACANTHA.** Hawthorn. *Merys, Draenen-wen, Yspsyddaden, Egfaenwydd*. The well-known thorny hedge shrub. Common everywhere.

**PYRUS.** Calyx tube thick and fleshy, forming when ripe a 1-5 celled fruit. Fl. in corymbs or umbels.

**P. AUCUPARIA.** Mountain Ash. *Pren criafal, Criafallen, Cerddinen*. L. pinnate. Lfts. oblong, serrate, downy when young, smooth when old. Fr. small, red in large bunches. Fl. in a corymb, white. Tree. Frequent in woods, everywhere.

**P. TORMINALIS.** Wild Service Tree. *Cerddinen wyllt, Criafallen wyllt*. L. broad, rounded at base, 7-lobed, lobes angular, serrate. Fl. in corymbs, white. Tree. Not common. Frequently planted. Sophia Gardens, Llandaff Churchyard, &c.

**P. ARIA.** White Beam. L. oval or oblong, large, with about 12 strong nerves on each side, serrate, very white beneath, sometimes slightly lobed towards end. Fl. small, white, corymbose. Tree. Not common. More frequently planted than the last. Same localities.

**P. COMMUNIS.** Iron Pear. *Rhwing-bren, Gellygbren*. L. ovate, serrate. Styles distinct. Fr. pear-shaped. Fl. large, white, in corymbs. Tree. April. Occasionally. Leckwith, Barry, Porthkerry, &c.

**P. MALUS.** Apple, Crabtree. *Afallen, Afalwydden*. L. ovate, serrate. Styles

united below. Fr. globose. Fl. large, white and red. Tree. April. Frequent. Leckwith, Llandough, Lavernock, &c.

## 25.—ONAGRACEÆ.

**EPILOBIUM** Capsule linear, 4-celled and 4-valved. Stamens 8. Seeds tailed.

**E. ANGUSTIFOLIUM.** Rosebay Willow Herb. *Helyglys harrd.* L. lanceolate. Fl. in a terminal raceme, rose colour. Pet. unequal. Stam. and styles bent down. Herb. July. Frequent. North Road, Caerau, Caerphilly Tunnel, Cynon Valley, &c.

**E. HIRSUTUM.** Great Hairy Willow Herb. *Helyglys per, Helyglys panawg.* L. ovate-lanceolate, serrate, woolly. Stem branching. Fl. large, rose. Petals equal. Stam. and styles erect. Herb. July. Common. Leckwith, Ely, Newport Road, &c.

**E. PARVIFLORUM.** Small-flowered Willow Herb. *Helyglys lledlwydd manflopeuog.* Stem small, scarcely branched. Fl. small, rose. Herb. July. Common. Leckwith, Penarth, Sully.

**E. MONTANUM.** Broad-leaved Willow Herb. *Helyglys llyfn llydanddail.* L. ovate or ov.-lanceolate, glabrous. Petioles short. Petals equal, pale purple. Stam. and styles erect. Herb. June. Frequent. Cooper's Fields, Wedal, Whitchurch.

**E. PALUSTRE.** Narrow-leaved Willow Herb. *Helyglys culddail y fawnog.* L. narrow lanceolate, sessile. Petals equal. Stigma entire or scarcely lobed. Herb. June. Frequent. Llanishen, &c.

**E. TETRAGONUM.** Square-stalked Willow Herb. *Helyglys pedrongl.* L. lanceolate, decurrent. Fl. pale purple. Herb. June. Watery places. Frequent. Dynas Powis, and Cadoxton.

**GENOTHERA.** Seeds not tailed. Fl. yellow.

**E. BIENNIS.** Evening Primrose. L. ovate-lanceolate. St. rough. Fl. large, yellow, opens in the afternoon. Herb. June. In great abundance on the slag hills, at Pentyrch, Maesteg. Frequent. Sophia Gardens, Cooper's Fields, Bute Docks, &c.

**CIRCÆA.** Stamens 2. Pet. 2. Capsule 1-2 celled, short.

**C. LUTETIANA.** Enchanter's Nightshade. *Swynyddlys, Lly-stephan cyffredin.* L. ovate or cordate-ovate, downy. Cal. hairy. Fl. reddish white. Herb. Frequent.

## 26.—HALORAGACEÆ.

**HIPPURUS.** Stam. 1. Stigma 1. Pet. none. L. simple.

**H. VULGARIS.** Mare's Tail. *Rhawn y gaseg.* Stem erect. L. simple, whorled. Fl. axillary. Herb. June. Ditches. Penylan, Leckwith. Frequent.

**MYRIOPHYLLUM.** Sep., pet., and stigmas 4. Stamens 4-8. L. pectinate, submersed.

**M. SPICATUM.** Spiked Water Millfoil. *Myrdd ddail tywysenaidd.* Spike leafless, erect in bud. Upper bracts ov. entire, lower often pectinate. Fl. whorled, reddish. Water herb. Rare. Leckwith, Reens, River Thaw, &c.

**M. VERTICILLATUM.** Whorled Water Millfoil. *Myrdd-ddail troellog.* Fl. all axillar and whorled. Bracts longer than flower. Spikes leafy. Water herb. June. Ditches. Rare. Leckwith, East Moors, &c.

## 27.—LYTHRACEÆ.

LYTHRUM. Cal. tubular. Pet. 4-6. Fl. red. Plant erect.

*L. SALICARIA.* **Purple Loostrife.** *Gwarllys, Llys y Milwr.* L. opposite, or in three's, lanceolate, sessile. Fl. whorled, in leafy spikes. Stam. mostly 12. Fl. crimson. Herb. Frequent. In ditches. Rumney Moors, Cadoxton, Sully, St. Fagan's, &c.

*L. HYSSOPIFOLIUM.* **Hyssop-leaved Purple Loostrife.** L. alternate, linear, lanceolate. Fl. axillary, pale purple, solitary. Stam. 6. Herb. August. Only on the ballast.

PEPLIS. Cal. bell-shaped. Pet. 6 or 0., very small. Plant prostrate.

*P. PORTULA.* **Water Purslane,** *Porpin, Troed y gywen.* L. opposite, obovate, stalked. Fl. axillary, solitary, reddish. Herb. Watery places. Caerphilly. Not common. Cefn On, near Pontypridd, Taff Valley.

## 28.—CUCURBITACEÆ.

BRYONIA. Cal. 5-toothed. Cor. 5-fid., Fruit a berry. Fl. monœcious.

*B. DIOICA.* **Bryony.** *Greol, Greuolen, Bloneg y ddaer.* Leaves palmately 5-lobed, hispid. Fl. greenish straw colour. Climbing herb. Very rare. Sophia Gardens Field, Castle Coch.

## 29.—PORTULACÆÆ.

MONTIA. Stig. 3. L. opposite.

*M. FONTANA.* **Water Blinks.** *Dyfr-wlyddyn y ffynnon.* L. opposite, spathulate. Fl. small, axillary, white. Plant tufted. Water herb. Common. Among wet grass, &c. Canton, Leckwith, Llanishen, &c.

## 30.—ILLECEBRACEÆ.

HERNIARIA. Sep. 5-flat. Pet. 5 filiform. Stam. 5. Fr. 1-seeded. Stem prostrate, very much branched. L. opposite.

*H. GLABRA.* **Rupture Wort.** *Llys y fors.* L. oblong, glabrous. Fl. greenish, minute, clustered, spiked. Herb. July. Rare. Only on the ballast

*H. CILIATA.* **Ciliated Rupture Wort.** L. roundish-oval, ciliated. Fl. greenish, minute in axillary clusters. Herb. Commoner than the last species. East Moors, near Copper Works, Old Artillery Range, &c.

POLYCARPON. Fruit many-seeded. Stam. usually 3. Sep. 5, keeled, hooded. L. roundish or ovate.

*P. TETRAPHYLLUM.* **Four-leaved Allseed.** *Gorhilig.* Stem prostrate, branched, stem-leaves usually in four's. Fl. small, whitish in axillary and terminal panicles. Herb. June. Rare. Near Canton Common.

## 31.—GROSSULARIACEÆ.

RIBES. Calyx 5-fid, persistent. Petals 5, small. Shrubs.

*R. GROSSULARIACEÆ.* **Gooseberry, Goosegogs.** *Grwyswydd, Eirin Mair, Perth Eurddraen.* Stem thorny. Fl. greenish, drooping, solitary, or in pairs. Sep. reflexed. Shrub. April. Occasionally in the Taff and Ely Valleys, as an outcast.

**R. ALPINUM.** Tasteless Mountain Currant. *Rhyfwyddden mynyddawl* Racemes of fl. erect. Stem not thorny. Bracts lanceolate, longer than pedicels. L. 3-lobed, shining beneath. Fl. green. Shrub. May. Rare. St. Donat's, Walls of Caerphilly Castle.

**R. RUBRUM.** Red Currant. *Rhesinwydd goch*. Racemes of fl. green, pendulous. Bracts ovate, shorter than pedicels. L. 5-lobed, not glandular beneath. Shrub. Fruit, red or white. Rare, and only as an outcast. Taff, Rumney, and Ely Valleys.

**R. NIGRUM.** Black Currant. *Rhesinwydd ddu*. Raceme drooping. Fl. green. Bracts awl-shaped, shorter than the pedicels. L. 3-5 lobed, with glandular dots beneath. Cal. downy. Shrub. May. River sides. Taff, Ely, and Thaw Rivers.

## 32.—CRASSULACEÆ.

**COTYLEDON.** Cor. tubular, 5-fid. St. 10. Carp. 5. L. umbrella-shaped.

**C. UMBILICUS.** Navel Wort. *Cron-doddaidd, Deilen-gron, Bogeil-llys, Bogail Gwener, Bogail y forwyn*. L. crenate. Fl. waxy yellow, in an erect raceme. Herb. July. Old walls, frequent. North Road, Barry, Sully, Caerphilly.

**SEDUM.** Pet. and carp. usually 5. Stam. 10-12. Each carp. with an entire scale to base.

**S. TELEPHIUM.** Orpine. *Bylws llydanddail, Berwr Taliesen, Canhewin*. L. flat, oval or oblong, toothed. Fl. purple, hermaphrodite. Herb. August. Rare. Llanishen, Cowbridge, Llantwit Major.

**S. ACRE.** Biting Stonecrop. *Bywydog boeth, Purpur y fagwr, Bywfyth leiaf*. L. ov., fleshy, entire, closely tiled on barren shoots. Fl. yellow, in a corymbose cyme. Herb. Frequent. Leckwith Bridge, Sully, Barry, St. John's Steeple, Cardiff.

**S. REFLEXUM.** Crooked Yellow Stonecrop. *Bywydog Llwynau 'r fagwr, Glys, Pidín fy modryb*. L. lanceolate, linear or awl-shaped, spurred at base, terete, lower recurved. Fl. yellow. Herb. July. Rare. Peterstone Castle, St. y Nyll.

**S. ANGLICUM.** White English Stonecrop. *Bryweg y cerrig, Gwenith y brain*. L. terete, spurred at base, ovate, fleshy. Fl. white and red. Herb. Frequent. Sully, Barry, Porthkerry, Fohtigary, &c.

**S. VILLOSUM.** Hairy Stonecrop. L. oblong, hairy, not spurred at base. Stem erect, glandular, hairy. Fl. cymose, rose. Herb. I collected this somewhere near Glyncorrwg, but do not remember the exact spot.

**SEMPERVIVUM.** Pet. and carp. 6-20. Stam. 12-40. Each carpel with a torn scale at base. L. fringed.

**S. TECTORUM.** Houseleek. *Bywfyth, Byddarllys, Dilosg, Llys pentai*. L. of barren shoots in rosettes, thick, fleshy. Fl. rose. Herb. Roofs. Rare. St. Nicholas, Barry, Cadoxton, &c.

## 33.—SAXIFRAGACEÆ.

**SAXIFRAGA.** Cal. 5-fid. Pet. 5. St. Stig. 2.

**S. TRIDACTYLITES.** Rue-leaved Saxifrage. *Tormaen tribys*. Fl. stem erect, leafy. St.-L. linear-oblong, or trifid, lowest spatulate. Fl. white. Whole plant glandular, hairy. Herb. April. Frequent. Dean Farm Wall, Roath, Llandaff, &c. An insectivorous plant.



**S. GRANULATA.** **White Granulated Saxifrage.** *Llyfenwy, Clor y brain.* Fl. stem erect, leafy. Root-L. reniform, crenate or lobed, root with many bulbs. Panicle glandular, hairy. Fl. white. Herb. Not common. Merthyr Road, 8½ miles from Cardiff.

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**CHRYOSPLENIUM.** Cal. 4-fid. Petals O. Stamens mostly 8.

**C. ALTERNIFOLIUM.** **Alternate-leaved Golden Saxifrage.** Lower L. alternate reniform. Fl. yellowish. Herb. Rare. Llanishen, Heol-y-mynydd.

**C. OPPOSITIFOLIUM.** **Opposite-leaved Golden Saxifrage.** *Eglyn cyferbyn-ddail.* Lower L. roundish-cordate, opposite. Fl. yellowish. Herb. Frequent. Wedal, Llandough, Caerau, St. Fagan's, &c.

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**PARNASSIA.** Cal. 5-fid. Pet. 5. Stem 5. Stig. 4. Five scales fringed with glands, alternate with stamen.

**P. PALUSTRIS.** **Grass of Parnassus.** *Brial y gors.* Root-L. cordate, stalked. St.-L. sessile. Fl. terminal, veined, white. Herb. Rare. Near Llanishen, Pwllpant.

### 34.—ARALIACEÆ.

**HEDERA.** Shrub. Cal. 5-toothed. Fl. many, umbellate.

**H. HELIX.** **Ivy.** *Eiddew, Iorwg, Aedorw.* L. with 5 angular lobes, leathery. Upper L. ovate, entire. Fl. green. Shrub. Climbing. Common, everywhere.

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**ADOXA.** Herbaceous. Cal. trifid. Fl. 5 in a close, square head.

**A. MOSCHATELLINA.** **Tuberous Moschatel.** *Anfri, Mwsglys.* Head of fl. waxy green, in a close terminal head. Stem-L. 2 opposite, lobed. Herb. Common. Cooper's Fields, Penarth, Penylan, Sully, Barry.

### 35.—CORNACEÆ.

**CORNUS.** Shrub. Fl. corymbose. Pet. 4.

**C. SANGUINEA.** **Cornel, Dogwood.** *Cwyros, Cwyrwialen.* L. opposite, stalked. Fl. white in terminal corymbs. Invo. O. Shrub. Frequent. In hedges. Leckwith, Llandough, Penylan, &c.

### 36.—LORANTHACEÆ.

**VISCUM.** Fl. clustered. Fr. a one-seeded berry.

**V. ALBUM.** **Mistletoe.** *Uchelawg, Uchelfar, Uchelwydd, Pren awyr, Gwysglys, Heonlllys.* Branches forked. L. obovate-lanceolate, obtuse. Fl. green. Fr. a white berry with gummy pulp. Parasitic shrub. Rare. Only where planted. Crockherbtown, St. Fagan's, &c.

### 37.—UMBELLIFERÆ.\*

**ERYNGIUM.** Fr. sessile, scaly or bristly, in dense heads, scarcely umbellate. L. lobed, spinose on edges.

**E. MARITIMUM.** **Sea Holly.** *Boglynnon arfor.* Stem-L. wavy, 3-lobed, glaucous, scales of inv. and receptacle trifid. Fl. blue. Herb. July. Frequent. Sully, Penarth, Barry, Leys, &c.

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\* This is a difficult natural order, and special attention has to be paid to the fruit, which must always be examined in a ripe state. Imperfect fruit is a frequent source of error and confusion.

**E. CAMPESTRE.** **Field Eryngo.** Stem-L. bi-pinnatifid. Scales of inv. and receptacle entire. Fl. blue. Herb. Very rare. Old Artillery Range. Abundantly.

**SANICULA.** Fr. with hooked bristles. L. palmately lobed. Fl. sessile in dense heads, scarcely umbellate.

**S. EUROPEA.** **Wood Sanicle.** *Golchuwraidd, Golchydde, Clyst yr arth.* L. serrate, leathery, shining. Fl. whitish. Herb. Common. Penylan, Coedygoras, Wedal, &c.

**HYDROCOTYLE.** Plant creeping, umbels, simple, irregular, few flowered. Pet. entire.

**H. VULGARIS.** **Marsh Pennywort, White Rot.** *Amrain.* Umbel about 5-flowered. L. peltate, crenate. Fl. whitish. Herb. July. Common. Wedal, Llanishen, Pwllpant, &c.

**BUPLEURUM.** Pet. entire, involute, yellow. Umbel simple.

**B. ROTUNDIFOLIUM.** **Round-leaved Hare's Ear.** *Paladr trwyddo.* L. perfoliate, oval. Bracts of involucl broadly ovate. Fl. yellowish. Herb. Very rare. Behind Temperance Town.

*Umbels compound.*

**CAUCALIS.** Fruit not beaked, bristly on ribs of fr.

**C. DAUCOIDES.** **Bur Parsley.** *Moronyn pigog?* L. bi-tripinnate. Segments pinnatifid. Inv. none. Involucl of 3-5 bracts. Fl. reddish white. Herb. Rare. On ballast only.

**DAUCUS.** Fr. not beaked, bristly. Bracts of inv. pinnate.

**D. CAROTA.** **Wild Carrot.** *Moron gwyltion, Moronyn y meuysdd, Meddyglyn, Nyth aderyn.* Prickles of fr. slender, distinct at base. Umbel concave in fr. L. bi-tripinnate. Lfts. pinnatifid. Fl. white. Herb. Common.

**D. MARITIMAS.** **Seaside Carrot.** *Moronyn arfor.* Prickles of fr. flattened, united at base. Umbel *convex* in fruit. L. tripinnate. Lfts. pinnatifid, somewhat fleshy. Fl. white. Herb. Frequent. Fontigary, Colhugh, Dunraven, &c.

**TORILIS.** Fr. not beaked, bristly. Inv. of 1-5 subulate bracts. Involucl 3-8 leaved, bristles on ribs and furrows of fr.

**T. ANTHRISCUS.** **Upright Hedge Parsley.** *Eulyn Berllys.* Stem erect, umbel terminal. Inv. of 3-4 bracts, bristles of fr. curved, rarely hooked. Fl. reddish white. Herb. Not uncommon in hedges in August. Castle Coch, Ewenny Bridge.

**T. NODOSA.** **Knotted Hedge Parsley.** *Clwm Eulyn Berllys, Troed y cyw clymmog.* Stem prostrate or spreading, umbel lateral, sessile, small crowded; outer fr. most bristly. Fl. very small. white. Herb. Frequent. Penarth, Sully, Swanbridge.

**SCANDIX.** Beak very long.

**S. PECTEN-VENERIS.** **Shepherd's Needle.** *Creithig nodwydd y bugail.* L. bi-pinnatifid. Segments linear, beak of fruit fringed. Frequent in corners of fields. Fl. white. Herb. June. Grangetown, St. Athan, Llantwit, &c.

**ANTHRISCUS.** Beak short.

**A. VULGARIS.** Common Beaked Parsley. *Creithig gwrychog*. Stem glabrous, swollen under the joints. Umbels lateral. L. tripinnate, segments cut. Fr. bristly. Fl. white. Herb. Very rare. Waste places. Near Cardiff and Penarth.

**A. SYLVESTRIS.** Cow Parsley. *Gorthyfail llyfn*. Stem downy. Umbel terminal. Fr. glabrous. Fl. white. Herb. May. Very common. On every hedge bank.

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*Umbels compound. Fruit more or less laterally compressed.*

**SMYRNIUM.** Involucel O. Fruit as broad as long. L. broad, ternately compound.

**S. OLUSATRUM.** Alexanders. *Dulys cyffredin, Alisantr y Ddulys*. Stem-L. ternate, lower bi-ternate, with large sheaths at base. Lfts. broad, lobed, serrate, glabrous. Fl. greenish-yellow. Herb. Common. Castle grounds, Penarth, Leckwith, Swanbridge, &c.

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**APIUM.** Involucel O. Fr. as broad as long. L. pinnate or ternate.

**A. GRAVEOLENS.** Celery. *Mers, Halogen, Perlllys yr hel*. L. glabrous. Lfts. cuneate, cut, umbel. mostly sessile. Fl. white. Herb. Frequent. Penarth, Leckwith, Bourton Bridge, &c.

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**ÆGOPODIUM.** Involucel O. Fr. longer than broad. Pet. obcordate, unequal, notched. L. ternately compound.

**A. PODAGRARIA.** Goutweed. *Llys y gymmalwst*. Lfts. ovate, pointed, serrate. Root-L. bi-ternate. Fl. white. Herb. Not very common. Churchyards at Cardiff and Llantwit Major, near Coedygoras, &c.

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**PIMPINELLA.** Involucel O. Fr. longer than broad. Pet. obcordate, nearly equal. Leaves pinnately compound. Fr. oval.

**P. SAXIFRAGA.** Burnet Saxifrage. *Gwraiddiriog cyffredin*. Root-L. pinnate. Lfts. roundish-oval, serrate often pinnatifid. Segments linear. Lfts. of stem-L. linear. Stem terete. Fl. white. Herb. Common. Penarth, Dynas Powis, Llandaff, &c.

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*Umbellules with involucels.*

**CONIUM.** Ridges of fr. crenate. L. tripinnate. Segments not filiform.

**C. MACULATUM.** Common Hemlock. *Cegigen cyffredin*. Stem terete, glabrous, spotted, plant slightly glaucous. Fl. white. Herb. Frequent. Penarth, Steep Holme, Sully, Barry, Dynas Powis, &c.

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**BUNIUM.** Ridges of fr. smooth. Segment of leaf filiform. Inflected point of petal broad, obtuse.

**B. FLEXUOSUM.** Earth Nut. *Bywi, Clor, Cylor, Cneuen y ddaer gyffredin*. Inv. O, or of 1-3 bracts. Styles erect in fruit. Fl. white. Herb. Common. May. Penylan, Llanishen, Lanedarn, &c.

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**CARUM.** Ridges of fr. smooth. Segments of leaf filiform. Inflected point of petal, narrow, acute.

**C. CARUI.** Common Carraway. *Carwas, Carddwy.* Involucre and involucrel O. L. bi-pinnate. Fl. white. Herb. June. Rarely as an outcast. Penarth, Grangetown, &c.

**C. VERTICILLATUM.** Whorled Carraway. Umbel with both inv. and involucrel. L. pinnate. Segments of lfts. whorled. Fl. white. Herb. Rare. Damp pastures near St. Lythan's.

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*Ridges of fr. smooth.*

**SIUM.** Pet. notched, with inflexed point. Cal. with 5 small teeth. All lfts. oval or lanceolate, sharply serrate.

**S. LATIFOLIUM.** Broad-leaved Water Parsnip. *Dyfr-foronyn llydanddail.* L. pinnate. Lfts. lanceolate, large, *equally* serrate. Fl. white. Herb. Frequent in ditches. E. Moors, Penarth Road, Leckwith, &c.

**S. ANGUSTIFOLIUM.** Narrow-leaved Water Parsnip. *Dyfr-foronyn culddail.* L. pinnate. Lfts. ovate or ovate-lanceolate, *unequally* serrate.

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**HELOSCIADIUM.** Pet. entire, with a straight or incurved point. Lfts. ovate, lanceolate, or hair-like.

**H. INUNDATUM.** Least Water Parsnip. *Amrain dyfrdrig.* Umbel of 2-3 rays, submersed L. capillary. Upper L. pinnate. Lfts. cuneate, trifid. Fl. white. Herb. May. Common. E. Moors, Grangetown, &c.

**H. NODIFLORUM.** Procumbent Water Parsnip. *Dyfr-foronyn syp-flodeuog.* L. pinnate. Lfts. ovate or ovate-lanceolate, *unequally* serrate. Umbel 4-8 rayed, nearly sessile, opposite the leaves. Fl. greenish-white. Herb. July. Not common. East Moors, West Barry.

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**PETROSELINUM.** Lower L. bi-tripinnate. Fr. ovate.

**P. SATIVUM.** Common Parsley. L. bi-pinnate. Stem erect. Fl. yellow. Herb. Rare. Wood at Swanbridge.

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**CHÆROPHYLLUM.** Fr. oblong. Carpels with 5 obtuse ridges. L. bi-pinnate.

**C. TEMULENTUM.** Rough Cow Parsley. *Gorthyfail garw.* Stem swelled below joints, spotted. Fl. white. Herb. June. Common. In hedges, everywhere.

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**MYRRHIS.** Fr. oblong  $\frac{1}{2}$  to 1 inch long when ripe. Carp with 5 acute ridges.

**M. ODORATA.** Sweet Cicely. *Creithig neu Sisly ber.* L. very large, tripinnate. Plant aromatic. Fl. white. Herb. May. Rare. Cwmffrwdor. *Mr. E. Lees.*

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**FÆNICULUM.** Inv. O. Involucrel O. Pet. entire, with an inflexed lobe. Section of fruit circular.

**F. VULGARE.** Common Fennel. *Ffenigl cyffredin.* L. tripinnate. Segments filiform. Fl. yellow. Herb. Frequent. Sully, Barry, Dunraven.

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*Petals entire with an inflexed lobe.*

**CRITHMUM.** Lfts. fleshy. Umbel of 15-20 rays.

**E. MARITIMUM.** Samphire. *Corn carw, Corn carw y mor, neu ffenigly mor.* L. biternate. Lfts. lanceolate or linear. Fl. whitish. Frequent. Swanbridge, Sully, Barry, Dunraven, &c.

**CORIANDRUM SATIVUM.** As an outcast at Lower Grangetown.

**ÆNANTHE.** Fr. ovate, turbinate, or cylindrical. Styles long, erect. L. pinnately compound. Pet. obcordate, notched, with an inflexed point.

**Æ. PIMPINELLOIDES.** Parsley Water Dropwort. *Dibynior perllys-ddail.* Roots fibrous with oval tubers. Lfts. of root-leaf cuneate cut. Fl. white. Herb. In the Reens, near Cardiff. Not common.

**Æ. FISTULOSA.** Common Water Dropwort. *Dibynior pibellaidd.* St. and petioles tubular, stem with creeping runners. Umbel of usually 3 rays. Ripe fruit with no thickened ring at base. Umbels terminal. Fl. white or pink. Herb. Common. Grangetown, E. Moors, &c.

**Æ. CROCATÆ.** Hemlock Water Dropwort. *Gysplys, Dibynior cegididd.* Stem erect, branched, stout. L. bi-tripinnate. Lfts. ovate-lanceolate, cut. Fl. white. Wet places. Common. Penylan, Leckwith, &c.

**ÆTHUSA.** Fr. broadly ovate. Styles reflexed. Inv. O. Bracts of involucre long, linear reflexed.

**Æ. CYNAPIUM.** Fool's Parsley. *Gcuberllys.* L. dark green, bi-tripinnate. Lfts. ovate-lanceolate, cut. Involucre, one-sided. Fl. white. Herb. Frequent. Roath Church, Penarth, &c.

**ANGELICA.** Fr. dorsally compressed, with a double wing on each side.

**A. SYLVESTRIS.** Angelica. *Llys yr Angel y geodwig.* Cal. obsolete. St. glabrous, polished. L. bi-tripinnate. Lfts. ovate, serrate. Pet. ovate or lanceolate, entire incurved. Umbel 20-40 rayed. Petiole much dilated at base. Fl. white. Herb. Common. Penylan, Llandaff, Gabalfa, &c.

**PASTINACA.** Fruit dorsally compressed. Wing single on each side. Inv. O. Involucre O.

**P. SATIVA.** Parsnip. *Moronyn, llysiau gwyddelig.* Fl. yellow. L. pinnate, downy beneath. Lfts. ovate cut. Stem angular. Herb. Frequent. Leckwith, St. Nicholas, &c.

**HERACLEUM.** Fruit dorsally compressed. Wing single on each side. Outer fl. radiant.

**H. SPHONDYLIIUM.** Hogweed. *Efwr cyffredin, Cron.* L. pinnate. Lfts. pinnatifid. Inv. deciduous. Involucre persistent. Petiole greatly dilated, and sheathings at base. L. rough. Fl. white. Herb. Common. Every hedge-side.

### 38.—CAMPANULACEÆ.

**LOBELIA.** Cor. irregular, 2-lipped. Capsule 2-3 celled.

**L. DORTMANNA.** Water Lobelia. Stem, almost leafless. L. radical, nearly cylindrical, hollow, submersed. Fl. racemose, drooping, blue. Herb. Rare. Llyn wawr, near Hirwain.

**JASIONE.** Corolla regular. Fl. capitate, in a dense spike with an inv. Anthers cohering at base.

**J. MONTANA.** **Sheep's Scabious.** *Clefyryn*. Stem branched. L. oblong or linear, wavy. Fl. heads solitary, terminal, blue. Herb. Common. E. Moors, the Heath, &c.

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**PHYTEUMA.** Fl. capitate, with an inv. Anthers free.

**P. ORBICULARE.** Flower heads globose. Stig. 3. Lower L. cordate, ovate; upper L. lanceolate, sessile. Fl. blue. Herb. Very rare. Cornfields, near Cowbridge.

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**CAMPANULA.** Cor. bell-shaped, regular. Fl. scattered or in a lax spike.

**C. ROTUNDIFOLIA.** **Blue Bell.** *Clychlys amryddail*. Root-L. roundish cordate, or reniform. Stem-L. linear-lanceolate or linear, glabrous. Fl. blue. Herb. July. Common. Penylan, &c.

**C. GLOMERATA.** **Clustered Bell Flower.** Root-leaves stalked. St.-L. cordate-lanceolate, sessile. Fl. purple, sessile, chiefly in a terminal cluster. Herb. July. Not common. Penarth, Castle ditches, Marcross, &c.

**C. TRACHELIUM.** **Nettle-leaved Bell Flower.** *Clychlys dynadd-dail*. L. cordate, or cordate-lanceolate, roughish, serrate. Fl. large, blue, stalked, axillary ped. 2-3 flowered. Herb. Rare. St. Fagan's, St. Andrews, St. Hilary.

**C. LATIFOLIUM.** **Broad-leaved Bell Flower.** *Clychlys llydanddail*. L. ovate-lanceolate, roughish, serrate, lower stalked, upper sessile. Peduncle erect, 1-flowered. Fl. large, purple. Herb. August. Coedriglan, Cowbridge, &c.

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**SPECULARIA.** Corolla rotate. Capsule long, prism-shaped.

**S. HYBRIDA.** **Corn Bell Flower.** L. oblong, wavy, sessile, rough. Calyx longer than purplish cor. Herb. Rare. Near Cowbridge. *C. T. Vachell, M.D.*

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**WAHLENBERGIA.** Cor. bell-shaped on long peduncle. St. trailing.

**W. HEDERACEÆ.** **Ivy-leaved Bell Flower.** L. roundish-cordate, 5-angled, stalked, glabrous. Stem thread-like. Fl. blue, on long peduncles. Herb. Frequent. St. Fagan's, Caerphilly, Taff Valley, Pontypridd, Quaker's Yard, &c.

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## EXOGENS—COROLLIFLORÆ.

### 39.—CAPRIFOLIACEÆ.

**SAMBUCUS.** Cor. rotate. Stig. 3, sessile. Stam 5. Berry 3-4 seeded. L. pinnate.

**S. NIGRA.** **Common Elder.** *Ysgawlwyn cyffredin, Pren ysgaw*. Corymb 5-fid. Stip. O. Lfts. ovate, serrate. Fl. white. Shrub. Common. North Road, Penarth, &c.

**S. EBULUS.** **Dwarf Elder, Danewort.** *Corysgawen, Creulys Mair, Ysgawen bendiged, Ysgawen Fair, Gwaed y gwyr*. Herbaceous, corymb 3-fid. Stipules cordate-ovate. Lfts. lanceolate, serrate. Fl. white. July. Hedges, occasionally, Cogan Pill, St. Athan, St. Bride's Major, Maesteg Isaf, &c.

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**VIBURNUM.** Cor. in fertile flowers, bell or funnel-shaped. Berry 1-seeded. L. entire or lobed, not pinnate.

V. **OPULUS.** **Guelder Rose.** *Gwifwrnwydd y gors, Corsuigen.* L. lobed, glabrous. Petioles glandular. Outer fl. of corymb, large, barren. Fl. white. Shrub. June. Common. Llandaff, St. Fagan's, &c.

V. **LANTANA.** **Wayfaring Tree.** L. ovate-cordate, serrate, downy above, nearly hairy beneath. Fl. white. Tree. June. Woods. Frequent. Leckwith, St. Fagan's, Pencoe, &c.

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**LONICERA.** Cor. tubular, irregular. Stam. 5. Style 1. Stigma capitate.

L. **PERICLYMENUM.** **Honeysuckle.** *Gwyddfid, Llaeth y geifr, Tethau'r gaseg.* L. all distinct, oval. Fl. white, yellow, or reddish. Shrub. Climbing. Everywhere common. Leckwith, Llandough, &c.

#### 40.—RUBIACEÆ.

**RUBIA.** Cor. rotate, 3-5 fid. Stam. 5. Fruit a berry.

R. **PEREGRINA.** **Madder.** *Gwreiddrudd gwilt, Cochwraidd.* L. 4, sometimes 6, in a whorl, ovate or lanceolate, shining above, edged with prickles pointing backwards. Fl. greenish-yellow. Herb. June. Frequent. Castle Coch Woods, Penarth, Sully, Barry, &c.

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**GALIUM.** Cor. rotate, 4-fid. Stam. 4. Fruit dry, 2-lobed or twin.

G. **APARINE.** **Goose Grass, Cleavers.** *Llai y perthi, Llys yr hidl, Gwilydd y perthi, Cyngafan.* L. 6-8 in a whorl. Ped. axillary, about 3-fid. Fr. covered with small hooked bristles. Fl. white. May. Common. In nearly every hedge.

G. **BOREALE.** **Cross-leaved Bedstraw.** Leaves 4 in a whorl, lanceolate. Fl. crowded, terminal, white. Fr. covered with small hooked bristles. July. Penarth, Castle Coch.

G. **SAXATILE.** **White Heath Bedstraw.** *Gwenwylydd lefn, Brigwydd wen.* Procumbent. L. obovate, mucronate, about 6 in a whorl. St. smooth. Fruit granulated, not bristly. Fl. white, numerous, in lateral and terminal panicles. Herb. June. Common. The Heath, Llanishen, Caerphilly, &c.

G. **ULIGINOSUM.** **Rough Marsh Bedstraw.** *Gwendon arw y migyn.* Stem weak. L. and stem with reflexed prickles. L. 6-8 in a whorl, bristle pointed, panicle few flowered, axillary. Fl. white. Herb. July. Frequent. In the Taff Valley, &c.

G. **CRUCIATUM.** **Crosswort.** L. 4 in a whorl, ovate or ovate-oblong, hairy. Fl. numerous, small, yellow, in axillary corymbs. April. Common. Penylan, Penarth, &c.

G. **VERUM.** **Yellow Bedstraw, Ladies' Bedstraw, Cheese Rennet.** *Brigwydd felen, Ceilion, Llys y cywer, Briger y twynau.* L. about 8 in a whorl, linear, furrowed, deflexed when in fruit. Fl. in dense panicles, yellow. Herb. June. Pastures. Common. Llanishen, Penarth, &c.

G. **MULLAGO.** **Great Hedge Bedstraw.** Stem sometimes hairy, never prickly. L. 6-8 in a whorl, obovate or oblong, panicle large, terminal. Fl. white. Herb. July. Common. Penylan, Leckwith, Twynyrodyn, Penarth, &c.

G. **PALUSTRE.** **White Water Bedstraw.** *Gwendon, Gwenwylydd y gors.* Stem weak. Flowers white, in a terminal panicle. L. about 4 in a whorl, with prickly edges, oblong, obtuse. Fr. smooth. Herb. Wet places. Frequent. Ely and Taff Valleys.

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**ASPERULA.** Fl. panicled. Cor. funnel-shaped. Stam. 4. Fr. twin, not crowned with cal. No inv.

**A. CYNANCHICA.** Quinsy Wort. L. linear, 4 in a whorl, upper L. very unequal. Fl. flesh-coloured, in corymbs. Herb. Rare. Hill pastures. Heol-y-mynydd, St. Bride's Major, &c.

**A. ODORATA.** Sweet Woodruff. *Llys yr eryr perarogl*. L. 8 in a whorl, lanceolate. Fr. rough. Fl. white, scented, in a terminal corymb. Herb. Frequent. Edges of woods, &c. St. Fagan's, Michaelstone-super-Ely, &c.

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**SHERARDIA.** Fl. crowded. Cor. funnel-shaped. Stam. 4. Fr. oblong, crowned with the cal.

**S. ARVENSIS.** Field Madder. *Sherardia glas*, *Corwreiddrydd*. L. 6 in a whorl. Stems diffuse. Fl. lilac, in terminal clusters with an involucre of about 8 bracts, longer than fl. Herb. Summer. Common in fields. Penylan, Leckwith, Llandough, Penarth, &c.

#### 41.—VALERIANACEÆ.

**CENTRANTHUS.** Cor. spurred. Stam. 1. Fr. 1-seeded, with a pappus.

**C. RUBER.** Red Valerian. *Triaglog goch*. All L. ov.-lanceolate, glabrous. Fl. red, spur long. Herb. June. Frequent. Whitefriars, Cardiff, Penarth, Steep Holme.

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**VALERIANA.** Cor. spurless. Stam. 2-3. Fr. 1-celled, with a pappus.

**V. OFFICINALIS.** Great Wild Valerian. *Llys Cadwgan*, *Gwell na'r aur*, *Cynffon y capwllt*. All L. pinnate. Lfts. lanceolate, toothed, usually 7-10 pairs, rarely 4-6, with a terminal lft. not larger than rest. Fl. pinkish white. Damp places. Frequent. North Road, St. Fagan's, Llandaff, Pontcanna.

**V. DIOICA.** Marsh Valerian. *Trialog bychan y gors*. Root-L. ovate, stalked. Stem-L. pinnatifid, terminal lobe largest. Fl. white or flesh. Herb. May. Marshes. Frequent. Llanedarn Road, Llanishen Water Works, &c.

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**FEDIA.** Fr. 3-celled (2 empty or abortive), 1-seeded, crowned with unequally toothed calyx.

**F. OLITORIA.** Common Corn Salad. *Diadwyth*, *Gwyglaeth yr oen*. Fr. with 1 fertile and 2 barren cells, crowned with 3 teeth, corky at back of fertile cell. Fl. in dense heads, bluish white. L. ovate-spathulate. Herb. April. Common. Penarth, St. Fagan's, Peterstone, &c.

**F. DENTATA.** Oval-fruited Corn Salad. *Gwyglaeth yr oen deintiauwg*. Fr. oval, 1-celled, crowned with 4 unequal teeth. Fl. in terminal corymbs and in forks of stem. L. narrow. Fl. flesh-coloured. Herb. June. Rare. Norton Hall, near Southerndown.

#### 42.—DIPSACACEÆ.

**DIPSACUS.** Receptacle with spiny scales. Cal. merely a margin to ovary.

**D. SYLVESTRIS.** Wild Teasel. *Teilai gwillt*. Heads oval-conical, scales of receptacle not hooked. L. opposite, upper connate, serrate. Fl. lilac. Herb. Common. Lower Grangetown, Leckwith, Penarth Road, &c.

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**KNAUTIA.** Receptacle hairy, heads with inv., ovary inferior. Cal. double, outer of 4 small teeth, inner with radiant teeth.



**K. ARVENSIS.** Field Scabious. *Clafryllys, Clais, Penlas.* Cor. 4-fid. Heads of fl. radiate, lilac. Lower L. simple or pinnatifid. St.-L. pinnatifid. Herb. July. Hedges and fields. Common.

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**SCABIOSA.** Receptacle scaly. Heads with inv. Ovary inferior. Cal. double, outer plaited, membranous, inner of 5 bristles.

**S. SUCCISA.** Devil's Bit Scabious. *Clafryllys gwreidd-don, Bara'r Cythraul.* Heads of fl. violet, somewhat globose, not radiate. Cor. 4-fid. L. obovate or lanceolate. Herb. July. Common everywhere. In meadows, &c.

#### 43.—COMPOSITÆ.

This order is divided into three sub-orders as follows:—**CICHORACEÆ.** Florets all *ligulate* and perfect like the hawkweeds; **CYNAROCEPHALÆ**, or thorny-headed plants—like the thistles, these have florets all *tubular* and perfect, sometimes radiant, perfect, outer ones sometimes neuter, *style swollen* below its fork; and **CORYMBIFERÆ**, as the daisy or ragwort, with the florets either all *tubular*, or those of the disc tubular, and those of the margin ligulate, all flowers perfect or those of the margin with pistils only, *style not swollen* below its fork.

#### CICHORACEÆ.

**LAPSANA.** Inv. with scale at base. Florets few. Receptacle naked. Pappus O.

**L. COMMUNIS.** Nipple Wort. *Cartheig cyffredin.* Fl. yellow, in a very lax panicle. L. ovate, lower L. lyrate. Herb. August. Waste ground. Common. Canton, Ely, Pensisley, St. Fagan's, &c.

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**CICHORIUM.** Inv. double. Receptacle naked. Pappus a membranous margin or scale.

**C. INTYBUS.** Endive, Chicory. *Ysgallen y merchydd, Ysgellog gwyllt.* Lower L. runcinate, upper L. clasping. Fl. blue, in pairs, large, sessile. Herb. June. Waste places. Frequent. E. Moors, St. Fagan's, Wenvoe, Whitchurch, &c.

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*Pappus simple, not feathered.*

**LACTUCA.** Fl. few in each head. Inv. cylindrical. Achenes more or less beaked.

**L. SCARIOLA.** Prickly Lettuce. L. prickly on midrib beneath, erect, sinuate or pinnatifid, clasping, panicle leafy. Fl. yellow. Herb. Common. On the ballast. Eagerly sought after by foreign sailors as a salad.

**L. VIROSA.** Strong Scented Lettuce. L. spreading, toothed or sinuate, prickly on midrib beneath, auricled and clasping. Fl. in a loose panicle, lemon yellow, fetid. Herb. On ballast. Common.

**L. MURALIS.** Ivy-leaved Wall Lettuce. *Gwylaeth.* L. not prickly on keel. L. lyrate, runcinate, auricled, clasping. Florets 5, yellow. Stem smooth, brittle. Herb. August. Old walls. Frequent. Llandaff, Castle Coch, &c.

**TARAXACUM.** Inv. double, reflexed in fr. Achenes with small raised points. Pappus stalked. L. all radical.

**T. OFFICINALE.** Dandelion. *Dant y llew.* L. mostly runcinate. Scape 1-flowered. Fl. yellow. Herb. Common. In pastures everywhere.

**CREPIS.** Achenes round or nearly so, ribbed. Pappus sessile. Stem branched. Inv. double.

**C. BIENNIS.** Rough Hawksbeard. *Gwalchlys llyfn.* Lower L. runcinate, rough, bristly, hairy; upper lanceolate, toothed, clasping. Achenes, 12-ribbed. Fl. lemon-coloured. Herb. Rare. July. Dry pastures. Near St. Athans.

**C. VIRENS.** Smooth Hawksbeard. L. slightly hairy, not rough, toothed or runcinate. Upper linear, sagittate, clasping. Fl. small, yellow. Herb. June. Not frequent. Pontypridd, Porth, Ystrad, &c.

**C. PALUDOSA.** Marsh Hawksbeard. Lower L. ovate or oblong, stalked, somewhat runcinate; upper, cordate-lanceolate, clasping. Fl. few, large, yellow. Inv. with black hairs. Achenes 10-ribbed. Herb. Occasionally. Llanishen, Caerphilly, &c.

**SONCHUS.** Inv. imbricated. Swelled at base. Pappus, sessile, soft, silvery. Achenes compressed.

**S. OLERACEUS.** Common Sow Thistle. *Llaeth ysgallen, Moch ysgallen cyffredin.* Inv. glabrous. L. pinnatifid or undivided. Achenes ribbed and transversely wrinkled. Fl. yellow. Herb. Common. In waste ground. Cardiff, Ely, Llandaff.

**S. ASPER.** Inv. glabrous. L. pinnatifid or undivided, prickly toothed, clasping. Achenes ribbed, but not wrinkled. Fl. yellow. Herb. Common with the last.

**S. ARVENSIS.** Corn Sow Thistle. *Llaeth ysgallen, Moch-ysgallen-yr-ar.* Inv. glandular, hairy. Lower L. runcinate; upper L. lanceolate, entire, clasping, with rounded auricles. Fl. yellow. Herb. Common. Cultivated fields. Everywhere.

**HIERACIUM.** Pappus sessile, rigid. Invol. imbricated, oval, not swelled at base. Achenes not beaked nor compressed, somewhat angular.

**H. PILOSELLA.** Mouse-Ear Hawkweed. *Heboglys torllwyd, Torllydig, Blewynog.* Stem with runners. Scapes leafless, 1-flowered. L. oblong or lanceolate, white beneath. Fl. yellow. Herb. June. Common. Hedge banks. Everywhere.

**H. AURANTICUM.** Orange Hawkweed. Stem with runners, leafy near base with a terminal corymb of 3-10 bright orange red fl., inv. with black hairs. L. obovate-lanceolate. Herb. Not common. Near Caerphilly Tunnel, plentiful; Green Meadow, Coedygoras, Coity, &c.

**H. MURORUM.** Wall Hawkweed. *Herboglys y muriau.* St. without runners. Root-L. oval or oblong, stalked. Stem-L. 1 or few, ovate or lanceolate, not clasping. Fl. corymbose, yellow. Scales of inv. few, short. Herb. June. Common. On walls, &c. Everywhere.

**H. UMBELLATUM.** Narrow-leaved Hawkweed. *Herboglys culddail.* St. without runners. Upper fl. branches in an irregular umbel, lower branches axillary. Stem-L. several, lanceolate or linear. Fl. yellow. Herb. June. Not common. Near Llandaff Station, Melingriffith, &c.

**H. SYLVATICUM.** Wood Hawkweed. Stem without runners. Root-L. oblong or lanceolate, sometimes spotted, tapering into foot-stalk, hairy, entire or dentate about the middle. Fl. yellow, corymbose. Woods. Frequent. St. Fagan's, Llantrissant, Pencoed, &c.

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*Pappus feathered.*

**HYPOCHÆRIS.** Inv. imbricated. Receptacle chaffy or scaly. Pappus stalked.

**H. RADICATA.** Long-rooted Cat's Ear. *Melynedd gorwreiddiog*. L. all radical, runcinate, hairy. Ped. thickened and scaly below the flower. Fl. yellow. Herb. Common. In pastures. Everywhere.

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**APARGIA.** Pappus of all achenes either in two rows (inner feathered, outer simple), or in one row feathered. Achenes all alike, slightly beaked. Receptacle naked. Pappus feathered, sessile.

**A. HISPIDA.** Rough Hawkbit. *Peradyl garw*. L. all radical, runcinate, rough, hairs forked. Scape 1-flowered. Inv. hairy. Fl. yellow. Herb. Frequent in meadows. Llandaff, St. Fagan's, &c.

**A. AUTUMNALIS.** Autumnal Hawkbit. *Peradyl cynhanafawl*. L. all radical, toothed or pinnatifid. Glabrous or nearly so. Scape branched. Ped. swelled under flower. Fl. yellow. Pappus brown. Herb. Common. Same localities as last.

**A. HIRTUS.** Hairy Hawkbit. L. all radical, lanceolate toothed or entire. Hairy scape 1-flowered. Yellow. Herb. Frequent. Waste ground. Not so common as the last two species.

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**PICRIS.** Receptacle and pappus as last. Inv. double. Inner scales even. Achenes transversely furrowed. Plant bristly.

**P. HIERACIOIDES.** Ox Tongue. *Tafod y llew, Gwylaeth chwerw*. St. branched. L. lanceolate, wavy. Fl. yellow. Herb. July. Frequent. E. Moors, Penarth, Llandough, &c.

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**TRAGOPOGON.** Receptacle naked. Pappus feathered, stipulate. Inv. simple. Plant glabrous.

**T. PRATENSIS.** Goat's Beard. *Barf yr afar felen, Barf y Bwch*. Fl. yellow. Florets as long or longer than the involucre. Herb. June. Common. Near the Baths. Canton, Leckwith, &c.

**T. PORRIFOLIUS.** Salsify. Fl. purple, large. Ped. swelled below fl. Herb. June. Very rare. Near Maesteg. An outcast probably.

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**HELMINTHIA.** Receptacle naked. Pappus feathered, stalked. Inv. simple. Plant very bristly.

**H. ECHIOIDES.** Bristly Ox Tongue. Hairs rising from white tubercles. L. lanceolate, upper, clasping. Fl. many, yellow. Herb. July. About Penarth, plentiful. St. Donat's, rare.

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CYNAROCEPHALÆ.

*L. thorny or fringed with prickles.*

**CARLINA.** Outer scales of involucre spiny; inner yellow, not spiny, longer than fl. Achenes silky. Scales of receptacle cleft.

**C. VULGARIS. Carline Thistle.** *Ellast cyffredin*. St. 1 or more flowered, cottony. L. lanceolate, sinuate, prickly, outer scale of inv. pinnatifid or bipinnatifid. Fl. yellowish red. Herb. Frequent. On the coast, Penarth to Southerndown.

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**SILYBUM.** All scales of inv. with strong thorns. Receptacle scaly. Filaments united.

**S. MARIANUM. Holy Thistle, Milk Thistle.** *Ysgallen Fair, Ysgallen wen, Ysgallen fraith, Ysgallen Mair*. L. glabrous, pinnatifid, prickly, very large. Fl. purple. Herb. August. Rare. On waste ground. E. Moors, Dynas Powis, &c.

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**CARDUUS.** All scales of inv., spiny. Receptacle bristly. Filaments distinct. L. thorny or fringed with prickles.

**C. NUTANS. Musk Thistle.** *Ysgallen ogwydd*. L. all thorny and decurrent. Fl. purple, large, solitary, drooping. Scales of inv. lanceolate, outer reflexed. Ped. thornless above. Pappus simple, rough. Herb. June. Common. East Moors, Sully, Penarth, Llandaff, &c.

**C. ACANTHOIDES. Curled Thistle.** *Ysgallen grych*. Fl. crimson, much smaller than last, usually clustered, roundish, nearly sessile. Ped. with a thorny border up to fl. Scales of inv. linear. Pappus simple, rough. Herb. June. Not uncommon. Cardiff, Penarth, Dynas Powis, &c.

**C. TENUIFLORUS. Slender-flowered Thistle.** *Ysgallen man-flodeuog*. Fl. smaller than last, pink, cylindrical. Scales of inv. ovate-lanceolate, erect. Pappus simple. L. all thorny and decurrent. Herb. June. Frequent. On the waste ground. Bute Docks.

*Pappus feathered.*

**C. LANCEOLATUS. Spear Thistle.** *March ysgallen*. L. truly decurrent, thorny, pinnatifid. Scales of inv. lanceolate, thorny, spreading. Fl. large, usually solitary, purple. Herb. July. Waste places. Common. Everywhere.

**C. PALUSTRIS. Marsh Thistle.** L. truly decurrent, very thorny. Scales of inv. ovate-lanceolate, mucronate, adpressed. Fl. small, clustered, purple or white. Herb. July. Common. In wet meadows. Everywhere.

**C. ERIOPHORUS. Woolly-headed Thistle.** Stem erect. Fl. large, purple, globose. Inv. with a dense cottony web. L. large, very slightly decurrent, cottony beneath, deeply pinnatifid. Lobes 2-fid., very thorny. Herb. Frequent. Penarth, Barry, Steep Holme, St. Athan, Boverton, &c.

**C. ACAULIS. Dwarf Thistle.** Stemless or nearly so. Fl. large, usually solitary, almost sessile, purple or white. L. not decurrent. Herb. July. Not common. Plentiful on Barry Island, and near Sully.

**C. ARVENSIS. Creeping Plume Thistle.** *Ysgallen cyffredin yr ar*. L. very slightly decurrent, wavy, pinnatifid, glabrous, or nearly so. Inv. with adpressed lanceolate scales, ending in a short spreading spine. Fl. purple. Herb. Very common. In waste places, &c. Everywhere.

**C. PRATENSIS. Meadow Plume Thistle.** *Ysgalen fwyth*. L. not decurrent, fringed with minute prickles, chiefly radical, lanceolate, wavy, cottony beneath. Stem 1-flowered, purple. Herb. Boggy pastures. Not common. Llanishen, Lisvane, Pencoed, &c.

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**ONOPORDIUM.** L. thorny. Receptacle honey-combed. Inv. globose. All scales spiny. Pappus simple.

**O. ACANTHUM.** **Cotton Thistle.** *Ysgallen gottymog.* Stem branched, tall, many-flowered, woolly. L. oblong, wavy, prickly, very decurrent. Fl. purple. Herb. Rare. On the ballast.

**ARCTIUM.** L. not thorny. Inv. imbricate, some of the scales of inv. hooked. Receptacle with stiff chaffy scales.

**A. LAPPA.** **Burdock.** *Cyngaf, Cedowrach, Baw mwcci, Caca-mwcci, Ciwg, Cribau'r bleiddiau, Cyngaf mawr.* Heads large, globose. Scales of involucre glabrous, all yellowish green. L. very large, wrinkled. Fl. purple. Herb. Frequent. Coedygoras, Penarth, Leckwith, &c. This plant varies considerably in district.

**SERRATULA.** L. pinnatifid, not thorny. Scales of involucre not hooked. Heads oblong. Receptacle bristly. Pappus in several rows.

**S. TINCTORIA.** **Saw Wort.** *Llifys cyffredin, Dant y pysgodin.* L. pinnatifid, rarely simple, terminal segment largest, finely serrate. Scales of inv. adpressed, inner coloured flowers purple, corymbose. Herb. Not common. Near New Cemetery, Penylan, Llanishen, Caerphilly. Old Camp, above Capel Llanbad, very plentiful.

**CENTAUREA.** L. not thorny. Inv. imbricated with fringed, sometimes thorny, scales. Receptacle chaffy or bristly.

**C. SOLSTITIALIS.** **St. Barnaby's Thistle.** Fl. yellow. Outer scales of inv. with palmate spines. St.-L. linear-lanceolate. Decurrent. Stem erect. Winged. Herb. June. Frequent on the ballast banks.

**C. ISNARDI.** **Jersey Star Thistle.** Fl. purple. Scales of inv. with palmate spines. L. lyrate toothed. Stem procumbent. Herb. June. Frequent on the ballast banks.

**C. CALCITRAPA.** **Common Star Thistle.** Fl. rose. Scales of inv. with stout thorns. L. pinnatifid. Segments few, linear. Stem erect, branched. Herb. Frequent. Old Sea Lock, East Moors, Penarth, Leckwith, &c.

**C. CYANUS.** **Corn Bluebottle.** *Penlas yr yd, Crammeno yr yd.* Sc. of inv. greenish, edges brown and white, toothed, thornless. L. linear. Stem cottony. Fl. sky-blue, radiate. Herb. Frequent. Penarth, Pencoed, Bridgend. Common on the ballast.

**C. SCABIOSA.** **Matte Felon, Greater Knapweed.** *Crammenog fwyaf, Pengaled fwyaf.* Inv. large not thorny, scales green, edged with black, toothed. L. pinnatifid. Fl. purple, radiate. Common. Penarth, Sully, Barry, &c.

**C. NIGRA.** **Black Knapweed.** *Pengaled liaf benndu.* Outer bracts of inv. oval, blackish, pectinate. L. lanceolate, toothed. Fl. purple. Herb. August. Common. Dry places, almost everywhere.

#### CORYMBIFERÆ.

**BIDENS.** Fl. discoid. Pappus of 3-4 prickly awns.

**B. CERNUA.** **Nodding Bur Marigold.** *Graban ogwydd.* Fl. yellow, drooping. L. lanceolate. Sessile serrate. Herb. Rare. St. Fagan's, Coedriglan.

**B. TRIPARTITA.** **Three-lobed Bur Marigold.** *Graban teir-rhan.* Fl. nearly erect. Lower L. trifid, stalked. Herb. Watery places. Rare. With the last species.

*Florets all tubular. Pappus hair-like.*

**PETASITES.** Pappus hair-like. L. all radical. Flowers in a thyrses.

**P. VULGARIS.** **Butter Bur.** *Alan mawr, Dail y tryfan.* Scape with soft scales, appearing before L. Fl. purple and white. Herb. Frequent. April. Banks of the Rhymney, Taff and Ely Rivers, Mellingriffith, &c.

**P. FRAGRANS.** **Sweet-scented Butter Bur.** Fragrant. Fertile fl., strap-shaped, pinkish white. Herb. Frequent. Near Cardiff Infirmary, Penarth, Llandough, St. Andrew's, Dimlands, Llantwit Major, &c. In full flower at Christmas.

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**EUPATORIUM.** Stem leafy. L. divided. Heads about 5-flowered.

**E. CANNIBINUM.** **Hemp Agrimony.** *Bedwen chwerw, Byddon chwerw.* L. 3-5 fid. Segments lanceolate, serrate. Fl. pink, in close terminal corymbs. Herb. August. Damp places. Common. Feeder Bank, Leckwith, Dynas Powis, Sully, &c.

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**LINOSYRIS.** Stem leafy. L. entire, glabrous. Heads hemispherical. Inv. lax.

**L. VULGARIS.** **Goldlocks.** *Llwyd boneddig, Moredaffedog.* St. leafy, erect. L. linear, dotted. Fl. corymbose, golden yellow. Herb. Very rare. July. Barry. Two specimens only, at Southerndown.

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**ANTENNARIA.** L. cottony on one side or both. Stem leafy. L. entire. Scales of inv. white or pinky. Receptacle convex. Pappus of barren fl. thickened upwards. Diœcious.

**A. MARGARITACEÆ.** **American Cudweed.** Stem erect, branched above. L. linear-lanceolate. Fl. many. Corymbose. Fl. yellowish white. Herb. Frequent. Rumney Valley, from Pwllpant downwards, Llanishen, &c.

**A. DIOICA.** **Mountain Everlasting.** *Edafeddog fynyddig, Edafeddog ysgaredig.* Branches procumbent. Stem erect, short, simple. Fl. rosy white, 3-5 together. Lower L. obovate or oblong. Stem-L. linear. Herb. Mountains. Rare. Rhondda, near Pentre, Glyn Ogwr.

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**GNAPHALIUM.** Scales of inv. brown, in (*luteo-album*) yellowish white. Heads hemispherical to oval. Receptacle flat. L. cottony, on one side or both. Stem leafy. L. entire.

**G. LUTEO-ALBUM.** **Jersey Cudweed.** Inv. yellowish. Stem cottony. L. linear or oblong, cottony. Fl. yellowish, in a dense corymb. Herb. Rare. Only on the ballast bank.

**G. ULIGINOSUM.** **Marsh Cudweed.** *Benndu, Eddyfedog benndu.* Inv. brown. Stem spreading, much branched. L. linear, cottony on both sides. Fl. brownish yellow, clustered at ends of branches. Herb. Common. Penylan, St. Fagan's, Fairwater, Llandaff, &c.

**G. SYLVETICUM.** **Spiked Cudweed.** *Edafeddog uniawnsyth y geodwig.* Inv. brownish. Stem. simple, erect or nearly so. Fl. brownish, axillary, solitary or clustered, forming a leafy spike. L. linear, glabrous above, cottony beneath. Herb. July. Not so common as last species. Around Aberdare and Cynon Valley.

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**FILAGO.** Inv. conical, outer florets intermixed with inner scales of inv. Receptacle conical. L. cottony on both sides.

**F. GERMANICA. Impious Weed.** *Edafeddog lwyd, Llys y gyndaredd Llwyd. Pen llwydd.* Heads globose or flattened, woolly, 20-40 flowered. Stem with branches springing from beneath terminal head. Fl. yellowish brown. Herb. August. Frequent. E. Moors, Grangetown. Penarth.

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*Fl. radiate. Florets of margin strap-shaped.*

**ASTER.** Florets of ray blue. Plant glabrous.

**A. TRIPOLIUM. Sea Starwort.** *Serenllys y morfa, Llys tanewyn.* Stem erect. L. lanceolate, entire, fleshy. Fl. blue, disc yellow. Herb. Common. Penarth, Sully, Barry, &c.

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**ERIGERON.** Florets of ray purplish, or yellowish white, filiform, plant hairy.

**E. CANADENSIS. Canadian Fleabane.** Stem branched. Fl. small, yellowish white, in a long panicle. L. linear fringed. Herb. Frequent on waste ground, near Cardiff; ballast bank, common.

**E. ACRIS. Blue Fleabane.** *Ammrhydllwyd rhuddlas.* Stem usually branched, branches 1-flowered. L. lanceolate or linear. Fl. of ray slightly longer than inv. Fl. blue ray, and yellow disc. Herb. July. Very rare. Nottage. *J. Bell, C.E.*

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**TUSSILAGO.** Fl. one on a scape appearing before the leaves.

**T. FARFARA. Coltsfoot.** *Y danol, Alan bychan, Carn yr ebol, Y Besychlys, Llun troed yr ebol.* Radiate, florets filiform. L. cordate-angular, cottony beneath. Fl. yellow, appearing before the leaves. Herb. March. Common. In waste ground, everywhere.

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**SOLIDAGO.** Inv. much imbricated, oblong. Florets of ray, few.

**S. VIRGAUREA. Golden Rod.** *Eurwialen, Melyneuraidd.* Root-L. stalked, serrate. Upper L. lanceolate. Stem erect. Fl. yellow, panicle. Herb. July. Common. Llandaff, St. Fagan's, Pwllpant, Caerphilly, &c.

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**INULA.** Florets of ray many, yellow. Pappus pilose in 1 row.

**I. HELENIUM. Elecampane.** *Marchalen, Llwyglys.* Root-L. large, ovate, stalked. Upper-L. clasping. Fl. large, mostly solitary. Scales of inv. broadly ovate. Herb. July. Not common. Penarth, Michaelstone-le-pit, Leckwith, Bridgend, Maesteg.

**I. CONYZA. Ploughman's Spikenard.** *Codowydd meddyg Mair, Meddyg y bugail.* L. ovate or ovate-lanceolate. Fl. yellowish ovate cylindrical corymbose, scarcely radiate. Inner scales of inv. linear. Herb. Frequent. Penarth, Sully, Barry and Taff Valley.

**I. CRITHMOIDES. Golden Samphire.** *Cedowys sugawl, Sampier y geifr.* L. linear, fleshy, 3-toothed at the end. Fl. golden yellow. Herb. Very rare. Near Southerndown.

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**PULICARIA.** Florets of ray many. Pappus in 2 rows, outer cup-like, membranous, inner pilose.

**P. DYSENTRICA. Common Flea Bane.** *Cedowys cyffredin.* L. oblong, clasping, woolly. Radiate florets, linear, much longer than those of disc. Outer pappus cup-like. Fl. yellow. Herb. July. Common. Everywhere. In damp places.

**P. VULGARIS.** **Small Flea Bane.** *L. lanceolate*, scarcely clasping. Radiate florets scarcely longer than those of disc. Outer scale of pappus minute, somewhat bristly, torn. Flowers duller yellow than last. Herb. Common. In damp places. Leckwith, Roach Ponds, &c.

**SENECIO.** Scales of inv. nearly equal, single row, sometimes with a few small scales at the base, usually brown or black at tip.

**S. VULGARIS.** **Common Groundsel.** *Greulys, Carnedd felen, Penfelen fenyw.* No radiate florets. *L. pinnatifid*, half clasping. Fl. yellow. Herb. January to December. Common. Everywhere. In waste ground, gardens, &c.

**S. VISCOSUS.** **Stinking Groundsel.** Radiate florets revolute. *L. pinnatifid*, clammy. Outer scales of inv. 2 or 3 lax, half as long as inner, inner 20. Achenes glabrous. Fl. yellow. Herb. June. Very common about Bute Docks. Frequent Penarth.

**S. SYLVATICUS.** **Mountain Groundsel.** *Penfelen ffynyddawl.* *L. not* clammy. Outer scales of inv. very minute, inner 12-14. Achenes silky. Radiate florets revolute, yellow. *L. pinnatifid.* Herb. June. Not very common. Penarth, Pwllpant, in Taff and Ely Valleys.

**S. JACOBÆ.** **Common Ragwort.** *Carneddfelen wryw, Llŷs y gingroen.* Fl. radiate, yellow. Radiate florets spreading. Lower *L. lyrate*, bi-pinnatifid, glabrous. Achenes of the disc hairy. Herb. June. Roadsides and pastures. Common. Everywhere.

**S. AQUATICUS.** **Marsh Ragwort.** *Penfelen y gors.* *L. lyrate*, glabrous. Achenes all glabrous. Fl. large, yellow. Herb. Marshy ground. Frequent. Cynon Valley, Bridgend, near Cardiff, Llandaff, &c.

**DORONICUM.** Inv. hemispherical, with 2 or 3 rows of equal scales. *L. ovate* or cordate. Fl. large.

**D. PARDALIANCHES.** **Leopard's Bane.** *Lewpard-dag.* *L. cordate*, uppermost sessile, the rest on auricled petioles. Stem 3-5 flowered. Fl. yellow. Herb. June. Very rare. Near Bridgend.

*Pappus membranous or none.*

**MATRICARIA.** Receptacle conical. Inv. flat. *L. with* capillary segments.

**M. CHAMOMILLA.** **Common Wild Chamomile.** *Amranwen, Bronwen (llygair).* *L. bi-tri-pinnatifid.* Fl. white. Herb. Frequent. Common. On the ballast.

**BELLIS.** Inv. hemispherical. *L. not* divided. Receptacle conical.

**B. PERENNIS.** **Daisy.** *Llygad y dydd, Aspygan.* Scape 1-flowered. *L. all* radical, obovate. Fl. white. Meadows. Everywhere.

**CRYSANTHEMUM.** Receptacle hemispherical or nearly flat. Pappus O. Achenes of disc nearly terete.

**C. LEUCANTHEMUM.** **Ox Eye Daisy.** *Aspygan sensigl, Llygad y dydd mawr.* Fl. white, large. Stem simple, 1-flowered. Stem-*L. narrow*, sessile, cut, clasping. Herb. Common. Fields and meadows. Everywhere.

**C. SEGETUM.** **Corn Marygold.** *Aban, Gold yr yd.* Fl. yellow. Stem branching. *L. glabrous*, clasping, lobed and toothed. Herb. Frequent. Among corn and on the ballast. August.



**PYRETHRUM.** Receptacle nearly flat. Pappus a membranous border. Achenes all angular.

**P. PARTHENIUM.** Common Feverfew. L. pinnate. Lfts. ovate pinnatifid. Fl. in a corymb. Fl. white. Herb. Frequent. As an outcast. Penarth, Bute Docks, &c.

**P. INODORUM.** Scentless Feverfew. *Ffenigl y cwn.* L. very compound. Segments capillary. Fl. solitary, white at the ends of branches. Herb. Common. Near Cardiff, &c.

**TANACETUM.** Inv. hemispherical. Pappus a slight membranous border. L. glabrous. Receptacle without scales. Florets all tubular.

**T. VULGARE.** Common Tansy. *Tanchys, Wroith, Gystlys.* L. bi-pinnatifid. serrate. Fl. yellow, in a corymb. Herb. August. Not common. Fields and waste places. Rumney, Taff and Ely Valleys, Pentyrch, Hensol, &c.

**ARTEMISIA.** Receptacle without scales, except first species. Florets all tubular. Inv. hemispherical or ovate. Pappus O. L. hoary on one side or both.

**A. ABSINTHIUM.** Wormwood. *Chwerwyn, Wermod llwyd.* Receptacle hairy. Fl. yellow, hemispherical, drooping. L. cut into many segments, whole plant greyish. Herb. August. Not common. Castleton, St. Athans, Flemingston, &c.

**A. CAMPESTRIS.** Field Wormwood. *Brytwn.* Stem procumbent before flowering, afterwards ascending. Flower very small, drooping, yellowish brown. L. much cut into linear segments, green above, silky beneath. Inv. not cottony. Herb. Very rare. About Bute Docks.

**A. MARITIMA.** Sea Wormwood. *Chwerlys, Wermod y mor, ogwydd-flodeuog.* Stem erect or ascending. Fl. of 3-5 florets, drooping, rarely erect. L. pinnate or bi-pinnate. Segments narrow, linear. Whole plant white and cottony. Fl. yellowish. Herb. July. Frequent. Coast from Penarth to Southerndown.

**A. VULGARIS.** Mugwort. *Bydiawg llwyd, Beidiawg llwyd.* Stem erect. Fl. erect, yellowish purple. L. pinnatifid or bi-pinnatifid. Segments lanceolate, green above, cottony beneath. Herb. Frequent. In hedges and waste places. About Cardiff, Llandaff, Whitchurch, Cynon Valley, Flemingston, &c.

**ANTHEMIS.** Receptacle convex, scaly. Pappus O. Fl. radiate. Achenes nearly round, ligulate florets, oblong, linear.

**A. NOBILIS.** Common Chamomile. *Milwydd, Camri cyffredin.* Receptacle conical. Fl. ray white, disc yellow, procumbent. Flowering branches ascending. Scales of receptacle obtuse. L. bi-pinnate. Segments linear, semi-cylindrical. Herb. Very rare. Outcast only. Near Grangetown, Old Sea Lock, &c.

**A. ARVENSIS.** Field Chamomile. Plant erect or decumbent, hoary. Scales of receptacle lanceolate, acute. Achenes 4-angled. Fl. ray white, disc yellow. Very rare. Ballast only.

**A. COTULA.** Stinking Chamomile. *Neu Camry y cwn.* Plant erect, glabrous. Scales of receptacle thread-like. Florets of ray white, without any style. Achenes round. Herb. June. Not common. Sully, Swanbridge, near St. Hilary, Llantrissant.

**ACHILLEA.** Receptacle nearly flat, scaly. Pappus O.

**A. PTARMICA.** Sneezewort. *Ystrewlys, Dystrewlys, Tafod yr wydd.* L. simple, acute, glabrous, sharply serrate. Herb. July. Frequent. About Cardiff, St. Fagan's, Whitchurch, St. Mary Church.

**A. MILLEFOLIUM.** Yarrow. *Gwilffrai, Milldail, Llys y gwaedlif, Wriscan llwyd.* Fl. in dense corymbs, white or pinkish. L. bi-pinnatifid. Lobes cut into very small, acute, narrow linear segments. Herb. June. Common. Canal Bank, New Cemetery, Penylan, &c.

**XANTHIUM.** Monoëcious. Barren fl. compound. Inv. of many imbricated, equal scales. Stamens 5. Florets funnel-shaped. Fertile fl. in pairs. Cor. O. Cal. of 2-3 lobed, prickly sepals. Fr. a prickly drupe.

**X. STRUMARIUM.** Smooth Burweed. *Cacawocci lleiaf.* L. cordate, toothed. Male flower in a terminal raceme, female fl. below. Fl. yellowish green. Herb. August. Frequent on the ballast near Bute Docks.

**X. SPINOSUM.** Spiny Burweed. L. palmate. Stem spiny. Fl. yellowish. With the last, but not so common.

#### 44.—ERICACEÆ.

**VACCINUM.** Cor. ovate, or bell-shaped, 4-5 fid. Fr. a berry. Ovary inferior. Stamen 8-10. Small shrubs.

**V. VITIS IDÆA.** Red Whortleberry. Small shrub. L. evergreen, obovate, dotted beneath. Margin revolute. Rhondda, above Waterfall. Never flowering.

**V. MYRTILLUS.** Black Whortleberry, Bilberry. *Llusen, Lluswydden.* Stem erect, 4-angled. Shrubby. L. ovate, serrate, annual. Fl. solitary. Reddish green, waxy. May. Frequent. Penylan, Coedygoras, Caerphilly, Pwllypant, &c.

**OXYCOCCUS.** Cor. deeply 4-fid. Segments revolute. Stem wiry. Fr. a berry.

**O. PALUSTRIS.** Marsh Cranberry. *Lygaeron, Ceiroş y waun.* L. ovate, evergreen, very small with revolute margins. Very small shrub, with rose-coloured flowers. June. Frequent. In the Hill district, Cefn On, Caerphilly Common, Llantrissant.

**CALLUNA.** Cal. double, outer green, inner coloured, longer than cor. each of 4 sepals. Cor. campanulate, 4-fid, withering on the fruit.

**C. VULGARIS.** Common Heather, Ling. *Grug cyffredin, Myncog, Amriwraeth blŵg.* L. minute. Sagittate, tiled in 4 rows. Fl. rose or white. Shrub. Common on the Mountains, North Road, Cardiff, Caerphilly to Merthyr.

**ERICA.** Cal. single, of 4 sepals. Cor. ovate or campanulate, withering on the fruit.

**E. TETRALIX.** Cross-leaved Heath. *Grug croesddeiliog.* Fl. in a terminal umbellate cluster. L. linear, 4 in a whorl. Margin revolute, ciliate at edge, style not longer than corolla. Shrub. July. Frequent on heaths. Great Heath, Llanishen, Caerphilly Common to Merthyr.

**E. CINEREA.** Fine-leaved Heath. *Grug lledlwyd.* L. 3 in a whorl, linear glabrous. Fl. in a dense raceme, purple. Small shrub. Common. July. Pentryrch to Merthyr.

**MONOTROPA.** Stam. 8-10. 4-5 petals, hooded at base. A herbaceous plant, with scales, but no true leaves.

**M. HYPOPITYS.** **Yellow Bird's Nest.** *Cyd-dyf.* Fl. in a raceme, drooping first, then erect; lateral fl. with 8 stam, terminal one with 10. Whole plant yellowish. Herb. August. Very rare. Great Wood, St. Fagan's. Sparingly in 1874, and again in 1885. Not found in intervening years.

#### 45.—ILICACEÆ.

**ILEX.** Cal. and cor. 4-5 fid. Stigmas 4.

**I. AQUIFOLIUM.** **Holly Tree.** *Celynen.* L. ovate, evergreen, mostly thorny. Fl. white. Frequent in hedges. Leckwith, Llanedarn, &c.

#### 46.—JASMINACEÆ.

**LIGUSTRUM.** Shrub. Cor. funnel-shaped. Fruit a berry.

**L. VULGARE.** **Common Privet.** *Yswydden.* L. elliptic-lanceolate, entire. Fl. white, in crowded terminal panicles. May. Common. In hedges, &c. Everywhere.

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**FRAXINUS.** Tree. Fl. appearing before the L. Cor. O. Fruit winged.

**F. EXCELSIOR.** **Ash Tree.** *Onen, Onwydden.* L. pinnate, with an odd lft. Fl. in clusters. April. Common. Everywhere.

#### 47.—APOCYNACEÆ.

**VINCA.** Corolla salver-shaped, twisted, 5-lobed.

**V. MINOR.** **Lesser Periwinkle.** *Erlysglleiaf.* Stem procumbent, woody. L. ovate-lanceolate or oblong, glabrous, shining. Fl. blue. April. Not common. Courtyrala, Swanbridge, St. Athan.

**V. MAJOR.** **Greater Periwinkle.** *Llowrig, Perfaflwyaf, Gwanwden.* Flowering stem erect. Barren branches procumbent. L. ovate, shining, ciliate. Fl. blue. May. Penylan Hill, Swanbridge. Very rare.

#### 48.—GENTIANACEÆ.

**CHLORA.** Cal. 8-fid. Cor. 8-fid. Style 1, deciduous. Caps. 1-celled.

**C. PERFOLIATA.** **Yellow Wort.** *Canrhi felen.* St.-Leaves perfoliate, glaucous. Fl. many, yellow, in terminal cymes. Herb. Frequent. Penarth, Barry, and coast to Southerndown.

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**MENYANTHES.** L. ternate. Corolla bearded or fringed.

**M. TRIFOLIATA.** **Buckbean.** *Ffaen y gors teirdalen.* Lfts. obovate. Fl. in an erect raceme, white. Stamens 5. Stigma capitate. Herb. Wet places. Frequent. Llanishen Road, St. Fagan's, Ystrad Owen, Gigman Bridge.

**ERYTHRÆA.** Corolla salver-shaped. L. opposite. Cal. and cor. 5 fid. Stam. 5. Stig. 2. Fl. pink or white.

**E. CENTAURIUM.** **Common Centuary.** *Canrhi goch, Ysgol Fair, Bustl y ddaear, Arlladlys, Ysgol Grist.* L. oblong. Fl. in a forked corymbose panicle, rose. Tube of opening corolla exceeding calyx. Herb. June. Common. Penylan, Coedygoras, Llanishen, Caerphilly, &c.

**E. LITTORALIS.** **Narrow-leaved Centuary.** *Canrhi goch arfor.* Root-L. spoon-shaped. Stem-L. linear. Fl. sessile, corymbose, rose. Frequent. Coast, Penarth to Southerndown.

**GENTIANA.** Calyx and corolla 4-5 fid. Stam. 4-5. Stig. 2. Fl. blue.

**G. AMARELLA.** **Autumnal Gentian.** Cor. 5-fid. Calyx with 5 equal segments. Fl. purple. Not common. Cefn On, St. Hilary Down.

**G. CAMPESTRIS.** **Common Gentian.** *Crwynllwys y maes.* Corolla 4-fid. Cal. of 4 segments, 2 much larger than others. Fl. blue. Herb. Not common. Barry, Bridgend, Hirwain, &c.

#### 49.—POLEMONIACEÆ.

**POLEMONIUM.** Cal. 5-fid. Cor. 5-fid. regular.

**P. CÆRULEUM.** **Jacob's Ladder.** *Llawathan.* L. pinnate with odd lft. Lfts. ovate-lanceolate. Stem angular, erect. Fl. blue. Very rare. Near the Great Heath.

#### 50.—CONVOLVULACEÆ.

**CALYSTEGIA.** Stem leafy. Cor. well-shaped. Cal. enclosed within two large bracts.

**C. SEPIUM.** **Great Bindweed.** *Boled Olwen, Cynglawfag fawr, Tagwydd, Cloffrwym y mwcci, Clych y perthi.* Stem climbing. L. ovate-cordate, somewhat sagittate and angular at base. Bracts cordate. Fl. large, white. Herb. Common. Hedges. North Road, Llandaff, Duffryn, &c.

**C. SOLDANELLA.** **Seaside Convolvulus.** *Cynghafawg arfor, Ebolgarn y mor.* Stem prostrate, short. L. small, reniform, fleshy. Bracts ovate. Fl. large, rose. Herb. June. Frequent. Penarth, Sully, Barry, Porthkerry, Pontigary, Aberthaw, &c.

**CONVOLVULUS.** Stem leafy. Corolla bell-shaped. Bracts distant from calyx.

**C. ARVENSIS.** **Small Bindweed.** *Taglys, Cynghafawg fechan.* L. sagittate. Bracts linear, small. Fl. smaller than last two species. White with rosy streaks. Herb. Common. Waste places. Cathedral Road, &c.

#### 51.—SOLANACEÆ.

**SOLANUM.** Cor. 5-fid. Fl. in corymbs or umbels. Anthers united. Fr. a berry.

**S. DULCAMARA.** Bittersweet, Woody Nightshade. *Elinog, Mynyglog.* Shrubby. Climbing. Upper L. hastate, the rest ovate. Fl. in lax corymbs, purple, berries oval, red. Shrub. June. Frequent. Penarth, Sully, Leckwith, St. Fagan's.

**S. NIGRUM.** Black Nightshade. *Mochlys cyffredin, Mochlys grawnddu.* L. ovate, toothed. Fl. in lateral umbels. Berries globose, black, rarely red. Fl. white. July. Waste ground. Not common. East Moors and Penarth.

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**ATROPA.** Cor. large, bell-shaped. Fl. solitary. Anthers free. Fr. a berry.

**A. BELLADONNA.** Deadly Nightshade. *Codwarth.* L. large, ovate, entire. Herb. June. Very rare. Llandaff Churchyard. Extinct since 1873. Shore, near Boverton.

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**DATURA.** Cor. tubular, funnel-shaped, plaited. Capsule imperfectly 4-celled, prickly.

**D. STRAMONIUM.** Thornapple. *Meiwyn.* L. large, ovate, toothed, glabrous. Fl. white. Herb. Rare. E. Moors.

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**HYOSCYAMUS.** Cor. bell-funnel-shaped, unequally 5-lobed, with a network of purple veins. Capsule 2-celled.

**H. NIGER.** Henbane. *Bela.* L. sessile, clasping, sinuately lobed, covered with long clammy hairs. Fl. yellowish. Plant fetid. June. Frequent. E. Moors, Grangetown, Penarth, Sully, Barry, Llantrithyd, &c.

## 52.—SCROPHULARIACEÆ.

**VERONICA.** Cor. rotate, unequally 4-fid. Stam. 2. Ovary 2-celled.

**V. SERPYLLIFOLIA.** Thyme-leaved Speedwell. *Rhwyddlwyn grywddail.* Spike leafy, terminal, many-flowered. Fl. blue. Stems decumbent. L. ovate, entire, glabrous, nearly sessile. Herb. May. Common. Everywhere. In roadsides and waste places.

**V. ARVENSIS.** Wall Speedwell. *Mur-rhwyddlwyn.* Lower L. ovate, serrate. Upper L. lanceolate, entire. Fl. blue. Herb. Common. On walls. Llandaff.

*Fl. in lateral axillary racemes.*

**V. SCUTELLATA.** Marsh Speedwell. *Rhwyddlwyn culddail y gors.* L. sessile, lanceolate, glabrous, racemes alternate, sometimes nearly opposite. Capsule flat of two orbicular lobes. Fl. flesh colour. Frequent. E. Moors, Leckwith, Penarth Road, St. Fagan's, &c.

**V. ANAGALLIS.** Water Speedwell. *Graeanllys y dwr.* L. sessile, lanceolate, racemes opposite. Caps. ovate. Stem erect, stoutish, hollow. Fl. blue. Herb. Common. E. Moors, Grangetown, Penarth Road, Leckwith Moors, &c.

**V. BECCABUNGA.** Brooklime. *Goferini, Llychlyn y dwr.* L. oval, sessile, glabrous. Stem decumbent. Fl. blue. Watery places. Herb. June. Common. Ely, Llandaff, &c.

**V. CHAMÆDRYS.** Germander Speedwell. *Rhwyddlwyn blewynnawg, Llysiau Llewellyn, Gwrnerth.* L. nearly sessile, ovate or cordate, crenate, hairy. Stem with two lines of hairs. Caps. shorter than cal. Fl. blue. June. Common. On hedge banks, &c. Everywhere.

**V. MONTANA.** Mountain Speedwell. *Rhwyddlwyn mynyddawl*. Racemes alternate, rarely opposite. L. stalked, oval, hairy, serrate. Stem hairy all round. Capsule very flat, orbicular, ciliate, much larger than calyx. Herb. May. Frequent. Cardiff, Llanedarn Road, Penylan, St. Fagans &c.

**V. OFFICINALIS.** Common Speedwell. *Feutawdd, Gwernerth, Rhwyddlwyn meddygawl*. L. oval, hairy, serrate. Racemes alternate, rarely opposite. Fl. sessile, or nearly so. Caps. somewhat narrowed at the base, triangular. Fl. blue or flesh. Herb. June. Common all over the district.

*Flowers solitary, axillary.*

**V. HEDERIFOLIA.** Ivy-Leaved Speedwell. *Rhwyddlwyn eiddewddail*. L. broadly cordate, 5-7 lobed. Sepals cordate, ciliate. Fl. pale blue. Herb. March. Frequent. Penarth, St. Fagans, Fairwater, &c.

**V. AGRESTIS.** Green Procumbent Speedwell. *Rhwyddlwyn gorweddaw*. L. cordate-oval, serrate. Sep. oblong, obtuse. Seeds 6 in each cell. Fl. blue. Herb. Cultivated Fields. Common in the district.

**V. BUXBAUMII.** Buxbaum's Speedwell. L. cordate-ovate, serrate. Sep. lanceolate, acute. Fl. blue. Capsule large, sharply keeled. Herb. June. Common. Cardiff, Llandaff, Lavernock, &c., and very abundant about St. Athans and Llantwit Major.

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*Stamens 4.*

**RHINANTHUS.** Cal. inflated, 4-toothed. Upper lip of cor. compressed laterally. Caps. obtuse, 2-celled. Seeds several, winged.

**R. CRISTA GALLI.** Yellow Rattle. *Arian cor, Arian y gweirwyr, Arian gwion, Cribell melyn*. L. narrow, oblong, serrate. Spikes loose. Lateral segment of upper lip of cor. short, roundish. Herb. June. Meadows, everywhere.

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**MELAMPYRUM.** Cal. not inflated, 4 fid. Upper lip of cor. compressed laterally. Caps. acuminate, 2-celled, 1 seed in each cell.

**M. PRATENSE.** Cow-wheat. *Biwlith, Beulith, Gliniogai melyn*. Fl. yellow, in pairs, in the axils of the leaves. Cor. closed, four times as long as cal. Upper-L. toothed at base. Herb. June. Frequent. Coedygoras, Rhwbina, Pwllpant, Pencoed, &c.

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**BARTSIA.** Upper lip of cor. entire or only slightly notched, not compressed laterally.

**B. VISCOSA.** Yellow Bartsia. L. lanceolate, serrate, lower opposite, upper alternate, whole plant covered with clammy hairs. Fl. yellow. Herb. July. Very rare. Between Bridgend Asylum and Gwaith-yr-haiarn.

**B. ODONTITES.** Red Bartsia. *Gwaedlys bychan, Gorudd*. L. lanceolate, serrate. Fl. red, in secund racemes. Stem usually branched. Herb. July. Common. \* Damp waste spots, on almost every roadside.

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**EUPHRASIA.** Upper lip of cor. 2-lobed, not compressed laterally.

**E. OFFICINALIS.** Eyebright. *Goleudrem, Golyglys, Gloewlys, Effros*. L. ovate, or cordate-ovate, toothed. Fl. axillary, white, veined. Herb. June. Roadsides and pastures. Common. Penylan, New Cemetery, Penarth, &c.

**SIBTHORPIA.** Sep. 5. Cor. rotate. Segments unequal. L. orbicular.

**S. EUROPEÆ.** Cornish Moneywort. *Ceiniglys Cerniw.* L. crenate or lobed. Fl. axillary, pinky white. Herb. Rare. Pwllypant, Pontypridd common, near the Rocking Stone.

**LINARIA.** Cor. personate, spurred. Cal. of 5 sepals, or 5 fid.

**L. CYMBALARIA.** Ivy-leaved Toadflax. *Trwyn y llo eiddewddail.* Stem prostrate, or hanging. L. glabrous, cordate, 5-lobed. Fl. axillary, solitary, pale purple. Herb. June. Old walls. Frequent. Llandaff, St. Fagans, Michaelstone-super-Ely, &c.

**L. SPURIA.** Round-leaved Toadflax. Stems prostrate, centre one sometimes short, erect. L. all ovate, hairy, alternate, entire. Fl. yellow and purple. Herb. June. Rare. E. Moors and Penarth. Never far from the ballast.

**L. ELATINE.** Sharp-pointed Toadflax. *Trwyn y llo blaenfeinddail.* Stems prostrate, the centre one sometimes short, erect. L. ovate, hastate, acute. Fl. yellow and purple. Herb. July. Rare. E. Moors and Penarth, never far from the ballast.

**L. VULGARIS.** Common Yellow Toadflax. *Llin y llyfant, Llin y forwyn, Gingroen fechan.* Stem erect. L. scattered, linear, glabrous. Sep. ovate. Fl. yellow, in a close terminal raceme. Herb. Common. Llanedarn Road, Penarth Road, Leckwith, &c.

**L. SUPINA.** Stem spreading, decumbent at base. Lower L. in a whorl. Sep. linear. Fl. yellow, much smaller than last species. Occasionally on the ballast, not elsewhere.

**L. MINOR.** Least Toadflax. Stems usually erect. L. lanceolate, obtuse, hairy. Fl. purplish blue. Axillary solitary. Whole plant clammy. Penarth and Lower Grangetown. On the ballast. Rarer than next species.

**L. REPENS.** Fl. white or pale purple, with blue veins, racemose. Spur as long as sep. Stem erect. L. glabrous. Herb. Not common. Near Old Sea Lock and Lower Grangetown.

**L. PURPUREA** and **L. PELISSERIANA** have been found twice on the ballast banks.

**ANTIRRHINUM.** Corolla two-lipped, with a palate closing the entrance of the tube. Gibbous at the base, not spurred. Cal. 5-fid.

**A. MAJUS.** Common Snapdragon. *Safn y llew, Trwyn y llo mwyaf.* Sep. ovate, obtuse, much shorter than cor. Fl. rose, with yellow palate. Not common. Llandaff, St. Andrews, Llantwit Major, &c.

**A. ORONTIUM** has occurred on the ballast.

**DIGITALIS.** Cor. large, tubular, unequal, spotted.

**D. PURPUREA.** Foxglove. *Bysedd cochion, Bysedd y cwn, Bysedd ellyllon, Ffion y ffriidd, Menyg y llwynog.* L. ovate or ovate-lanceolate, crenate. Fl. rose-colour, spotted, drooping, in an erect raceme. Herb. Frequent, all over the district. Penylan, Ely, &c.

**PEDICULARIS.** Cor. 2-lipped, gaping. Cal. inflated, especially after flowering. Fl. pink or white. L. much divided.

**P. SYLVATICA.** Pasture Lousewort. *Melsugn y borfa, Mel-y-cwn.* St. short, erect, branches prostrate. Cal. 5-lobed, glabrous. Fl. rose. Frequent. In pastures. St. Fagan's, Llantrissant, Capel Llaniltern, &c.

**P. PALUSTRIS.** Marsh Lousewort. *Melawg y waun, Mel y gweunydd.* Stem erect, branched, branches spreading or ascending. Cal. 2-lobed, downy. Fl. rose. Frequent. St. George's, near Culver House, St-y-Nyll, &c.

**MIMULUS.** Cor. 2-lipped, gaping. Cal. tubular, 5-angled, 5-toothed. L. ovate.

**M. LUTEUS.** Yellow Monkey Flower. Stem creeping, flowering, branches ascending. L. roundish-ovate. Fl. large, yellow. Ditches on Caerphilly Common. Spreading a good deal during the last ten years.

**SCROPHULARIA.** Cor. with 2-lobed upper lip, often with a small scale within, lower lip turned downwards.

**S. AQUATICA.** Water Figwort. *Gornerth y dwr, Dannogen y dwr.* Stem winged. L. cordate-oblong, toothed, glabrous. Fl. panicked. Upper lip of cor. with an unnotched scale inside. Fl. purplish. Herb. Frequent. Banks of the Ely, Taff, and Rhymney Rivers, and many ditches.

**S. SCORODONIA.** Balm-leaved Figwort. Stem not winged. L. cordate, downy, toothed. Fl. purplish. Scale not notched. Near Old Sea Lock. Extinct since 1881.

**S. NODOSA.** Knotted-rooted Figwort. *Deulen ddu dda, Gornerth, neu Goreunerth.* Stem square, not winged. Scale of cor. slightly notched. L. cordate-ovate, glabrous. Fl. purplish. Woods and hedges. Common. Leckwith, Ely, St. Fagans, &c.

**VERBASCUM.** Cor. rotate. Stamens 5. Filaments, all or some, woolly.

**V. THAPSUS.** Great Mullein. *Blewog, Tewbannog, Sircyn y melinydd.* L. oblong, strongly decurrent, flannelly. Fl. in dense spikes, yellow. Cor. twice as long as cal., 3 shorter filaments hairy. Herb. Frequent. Near Llandaff, Sully, Barry, Steep Holme. &c.

**V. LYCHNITIS.** White Mullein. *Pannog brithgoch.* L. not decurrent, upper side of L. nearly glabrous, under mealy. Stem angular. Herb. Not uncommon on the ballast.

**V. NIGRUM.** Black Mullein. L. not decurrent, both sides nearly glabrous. cordate-ovate stalked, more or less downy. Peduncle twice as long as calyx. Not uncommon with the last.

**V. BLATTARIA.** Moth Mullein. L. not decurrent, oblong, crenate, glabrous (or slightly glandular), hairy, somewhat clasping. Hairs of filament purple. Fl. yellow. Herb. Rare. St. Fagans, near Tondy Ironworks.

The genus **VERBASCUM** is one which is very subject to natural hybridization and it is frequently very difficult to specifically discriminate the species.

### 53.—OROBANCHACEÆ.

**OROBANCHE.** Cal. deeply cleft into 2, 4, or 5 pointed sepals. Cor. 2-lipped, gaping 4-5 fid.



**O. MAJOR.** Greater Broomrape. *Orfungc, Paladr hir, Corn yr afr, Corn y bwch.* Plant brownish. Style downy. Stigma yellowish, or yellowish-brown. Sepals 2, bifid. Bracts single. Stamens 2 long and 2 short, glabrous below. Parasitic herb. Very rare. St. Fagans.—*T. W. E. David.* Near Cadoxton Mill, and Merthyr-dovan Church.

**O. HEDERA.** Ivy Broomrape. Plant purplish brown. Bracts single. Sepals 2, entire. Style glabrous. Herb. July. Very rare. Sully.—*R. Woods.*

**O. ELATIOR.** Great Broomrape. *Caldrist y Banadl.* Plant more or less yellow. Bracts single. Sep. 2, bi-fid. Stigma yellowish. Stam. hairy below. Herb. July. Very rare. Courtyrala.—*Thomas Chapman.*

**LATHRÆA.** Cal. with 4 short teeth. Cor. 2-lipped, upper lip helmet-shaped.

**L. SQUAMARIA.** Toothwort. *Deintlys cenog.* Fl. pendulous. Scales of stem ovate, fleshy, whole plant reddish-cream-coloured. Parasitic herb. May. Local, but abundant where found. Cooper's Fields, Coed-y-Mwstwr, near Llangrallo, &c.

#### 54.—VERBENACEÆ.

**VERBENA.** Cal. 5-fid. Cor. 5-fid. Ovary 4-celled.

**V. OFFICINALIS.** Vervain. *Briu 'r march, Cas gan cythraul, Llys yr hudol.* L. opposite, pinnatifidly cut, upper L. oblong, lanceolate, serrate. Stem erect. Fl. pale lilac, in long spikes. Herb. July. Common. East Moors, Penarth, Sully, Cadoxton, &c.

#### 55.—LABIATÆ.

**LYCOPUS.** Stam. 2. Cor. nearly regular. Cal. 5-fid. Fl. white.

**L. EUROPÆUS.** Gipsy Horehound. *Llys yr hudolesau, Llys y sipsiwm.* L. ovate-lanceolate, stalked, toothed, or pinnatifid. Fl. in axillary whorls. Herb. July. Wet places. Canal banks. Common in the Taff, Lynfi, and Garw Valleys.

**SALVIA.** Stam. 2. Cor 2-lipped. Cal. 2-lipped. Fl. blue or purplish. Anther with 2 perfect and 1 abortive cell.

**S. VERBENACA.** Wild Clary. *Torfagl, Golwg Crist.* Root-L. oblong or ovate, wrinkled; upper-L. broadly ovate, clasping. Tube of cor. about as long as cal. Fl. purplish. Herb. June. Not common. About Cardiff, Penarth, and Barry.

**MENTHA.** Stamens 4, nearly equal. Cor. nearly regular, 4-fid., shorter than the stem.

**M. PULEGIUM.** Pennyroyal. *Colyddlys, Llyrcadys, Brefai, Bref-llys, Brymlys.* Barren stems prostrate. Flowering stem ascending. L. ovate-oblong, obtuse. Fl. light purple, all in axillary whorls. Herb. Rare. About Pencoed, Penprisc, &c.

**M. HIRSUTA.** Water Mint. *Mintys blewog.* L. stalked, ovate, serrate, hairy. Cal. not hairy inside. Fl. in a thick terminal head, and 1 or 2 axillary whorls below. Flowers lilac. Herb. June. Not common. St. Fagans, near Sully Rectory.

**M. ROTUNDIFOLIA.** Round-leaved Mint. *Mintys lledcrynddail*. L. oval or orbicular, obtuse, sessile, serrate, whitish or woolly beneath. Fl. reddish. Herb. Not common. St. Fagans, Taff's Well, Pencoed, &c.

**M. SYLVESTRIS.** Horse Mint. L. ovate-lanceolate, nearly sessile, serrate, hoary. Spikes, several together, of leafless bracteated whorls of lilac fl., mostly terminal. Herb. Rare. Waste ground. Near Pencoed, Moulton.

**M. VIRIDIS.** Spear Mint. L. lanceolate, acute, serrate, glabrous, sessile. Fl. lilac, in tapering terminal spikes of leafless whorls. Occasionally in waste places. Near Cardiff, Bridgend, &c.

**M. PIPERITA.** Peppermint. L. shortly stalked, ovate or ovate-lanceolate, nearly glabrous. Spikes terminal, leafless, short obtuse. Fl. purple. Very rare. Near St. Fagan's.

**M. ARVENSIS.** Corn Mint. *Mintys-ar-dir*. L. ovate or oval, stalked, hairy, calyx teeth, triangular. Fl. lilac, in axillary leafy whorls. Common. Everywhere, in fields. Penarth, St. Fagans, &c.

**THYMUS.** Stamens 4, nearly equal, longer than cor., which is somewhat 2-lipped. Cal. 2-lipped, upper lip 3-toothed, lower 2-fid. Fl. whorled, or in terminal heads.

**T. SERPYLLUM.** Common Thyme. *Gruw, Gruwlys gwyllt*. Stem wiry, procumbent. L. ovate, fringed. Fl. rose, rarely white. Herb. June. Frequent. On dry moorish ground. Llanishen, Caerphilly, Pontypridd, &c.

**ORIGANUM.** Stamens 4, diverging, rarely equal, longer than cor., which is slightly 2-lipped. Calyx with 5 equal teeth. Fl. in spikes, imbricated with purple bracts, corymbose or paniced.

**O. VULGARE.** Marjoram. *Mesuraid cyffredin, Penrudd, Mintys y creigiau*. L. ovate, stalked, bracts ovate, purple. Fl. rose. Not common. Dry hedges. Near Barry, and St. Athan.

**TEUCRIUM.** Stam. 2 long and 2 short, upper lip of cor. very short or nearly wanting, deeply 2-fid. Fl. pointing all one way.

**T. SCORODONIA.** Wood Sage. *Triagl y cymro, Chwerwlys yr eithin, Cherwyn y twyn, Saets gwyllt*. Stem erect. Fl. straw-colour, mostly in pairs in a leafless bracteated secund raceme. Common, almost everywhere. On dry banks.

**AJUGA.** Stam. 2 long and 2 short. Upper lip of cor. very short or nearly wanting, entire or only slightly notched. Fl. in whorls.

**A. REPTANS.** Creeping Bugle. *Golchenid cyffredin, Glesyn y coed*. Stem erect with creeping runners. L. obovate, glabrous, or nearly so. Fl. blue in axillary whorls. Herb. May. Common in woods and meadows. Penylan, Penarth, St. Fagans, &c.

**LEONORUS.** Stam. 2 long and 2 short. Upper lip of cor. longer than stam. Cal. 5-10 ribbed, with 5 nearly equal teeth. Lower lip 3-7 lobed.

**L. CARDIACA.** Mother Wort. Upper L. cuneate-lanceolate, 3-lobed or entire. Lower L. 5-lobed. Fl. white or pink, 5-15 in a whorl. Herb. July. Very rare. St. Hilary.

**GALEOBDOLON.** Stam. 2 long 2 short. Upper lip of cor. longer than stam. Cal. 5-ribbed. Fl. yellow. Lobes of lip of cor. 3, equal, entire.

**G. LUTEUM.** **Weasel Snout.** *Eurddanadlen.* L. ovate, serrate, stalked. Fl. axillary, yellow. Herb. Frequent. Llanedarn Road, Penarth, Dinas Powis, &c.

**BALLOTA.** Stam. 2 long and 2 short. Upper lip of cor. longer than stam. Cal. 10-ribbed, long and funnel-shaped, whorls secund, with many filiform bracts.

**B. NIGRA.** **Stinking Horehound.** *Marddynad ddu, Marddanadlen ddu, neu Ddrewsawr.* L. ovate. Cal. teeth, broad, short, reflexed. Fl. purple or white. Herb. July. Frequent. In waste places. E. Moors, Penarth, Llandaff, Ely, &c.

**LAMIUM.** Cal. 10-ribbed, short. Cor. bell-shaped. Lower lip 2-lobed with 1 or 2 teeth on either side, tube swollen at throat. Stem decumbent at base.

**L. AMPLEXICAULE.** **Henbit.** *Marddanadlen goch cylchddail.* Upper L. sessile. clasping, orbicular, or reniform-cordate. Tube of cor. much longer than cal. Cal-teeth green, converging in fruit. Fl. buds, downy, carmine. Herb. April. Rare. Corners of fields. Penarth, near St. Athan.

**L. INTERMEDIUM.** Differing from the last species only in having the calyx teeth, purple, long, and spreading in fruit, and its stronger growth. Is more frequent in the district. June. Rare. Roadsides, fields, &c. Near Llandaff, Caerphilly and Pontypridd.

**L. PURPUREUM.** **Purple Deadnettle.** *Dynad, Marddanadlen goch, Danadlen farw goch.* L. all stalked, cordate, crenate, toothed. Upper L. and whorls of fl. crowded at end of stem. Fl. smaller than last species. Tube of cor. with a hairy ring inside. Herb. Common. Waste places. All the year. Penarth, Llandaff, &c.

**L. INCISUM.** **Cut-leaved Deadnettle.** *Marddanadlen goch a dail gwahanedig.* L. all stalked, cordate-triangular, deeply cut. L. and whorls of fl. crowded at end of stem. Tube of cor. naked inside, purple. Herb. May. Rare. Fields and waste ground. Penarth Ferry, near Barry Mill.

**L. ALBUM.** **White Deadnettle.** *Marddanadlen wen.* L. all stalked, cordate-ovate, upper leaves not crowded at end of stem. Fl. large, white. Herb. April. Common. Waste ground. St. John's Chuichyard, Cardiff, Llandaff, Caerphilly, &c.

**L. MACULATUM.** **Spotted Deadnettle.** L. cordate-ovate, marked with white, all stalked. Fl. rose-coloured. Herb. June. Occasionally in waste ground. Penarth, Lavernock, Bonvilstone, Llantwit Major, &c.

A WHITE flowered variety near Tollgate, Pencoed.

**GALEOPSIS.** Cal. 10-ribbed, short, bell-shaped. Lower lip of cor. 3-lobed, with one or two teeth on each side.

**G. LADANUM.** **Red Hempnettle.** L. narrow. Stem not swelled under nodes. Cal. teeth not longer than tube, hairs short and soft. Upper lip of cor. slightly notched. Fl. rose purple. Herb. July. Not common. Penarth, Sully, Bonvilstone, Pencoed, &c.

**G. TETRABIT.** **Common Hempnettle.** *Penboth gyffredin.* L. oblong-ovate. Stem swelled under nodes. Cal. teeth long, stiff, hairs long, harsh. Cor. longer than cal. Fl. rose or white. Herb. July. Fields. Frequent in the neighbourhood.

**G. VERSICOLOR.** **Great Hempnettle.** L. broader than last species. Stem much swelled under nodes. Cal. teeth long, stiff. Fl. large, yellow, with purple spot on lower lip. Cor. 3 times as long as cal. Herb. July. Among corn, &c. Rare. Near Aberdare and Mountain Ash.

**STACHYS.** Lower lip of cor. trifid without lateral teeth. Lateral lobes reflexed. Tube of cor. equal to calyx. Cal. 10-ribbed.

**S. PALUSTRIS.** Water Woundwort. *Briwlys y gors*, *Briwlys y taiog*. L. sessile, lanceolate, serrate, with short hairs, whorl 6-10 flowered. Fl. reddish purple. Herb. Marshy places. Frequent. Grangetown, Leckwith, Llandaff, &c.

**S. ARVENSIS.** Corn Woundwort. *Briwlys yr ar*. L. ovate or cordate, ovate, obtuse, stalked. Cor. pale, reddish purple, hardly longer than cal. Stem weak, spreading. Herb. Cornfields, &c. Frequent. Penylan, Llanishen, Penarth, &c.

**S. SYLVATICA.** Wood Woundwort. *Briwlys y gædwig*. L. cordate, acute, serrate, stalked. Cor. much longer than cal. Whorl spiked. Fl. purple, smell nauseous. Herb. Common. In woods and waste ground. Generally over district.

**BETONICA.** Lower lip of cor. nearly flat, trifid without lateral teeth. Tube of cor. longer than cal. Cal. 10-ribbed.

**B. OFFICINALIS.** Common Betony. *Cribau St. Ffraid*, *Llys dwyfawg*, *Dannogen*. Lower L. oblong, cordate at base, upper lanceolate, serrate. Fl. purplish red. Frequent. In woods, &c. Penylan. St. Fagans, Pwllpant, &c.

**NEPETA.** Cal. 15-ribbed. Middle pair of stam. longest.

**N. CATARIA.** Cat Mint. *Mintys y gath*. Stem erect, branched. L. ovate-cordate, toothed, whitish, whorls of fl. white, densely spiked. Herb. July. Very rare. Caerphilly.—*R. Woods*. [I failed to find this myself.—J.S.]

**N. GLECHOMA.** Ground Ivy. *Beidiawg las*, *Bydiawg las*, *Eidral*. Stem procumbent. L. reniform, crenate. Whorls of 3-6 blue flowers, axillary. Herb. April. Very common on hedge-banks everywhere.

**MARRUBIUM.** Stam. shorter than tube of cor. Cal. with 10 hooked teeth. Plant cottony.

**M. VULGARE.** White Horehound. *Llwyd y cwn*, *Perchwerwyn*, *Marddynad ber*, *Marddanadlen ber*. Leaves oval to round, soft, whitish. Fl. white. Herb. July. Not common. Ely, St. Fagans, St. Hilary, Barry, Steep Holmes, &c.

**CALAMINTHA.** Cal. 2-lipped. Stamens diverging. Tube of cor. straight. Upper lip flattish.

**C. CLINOPODIUM.** Wild Basil. *Breninllys gwyllt*. L. oval, hairy. Fl. rose coloured, in dense, crowded, axillary whorls, with an involucre of bracts. Herb. June. Frequent. St. Fagans, Bonvilstone, Kingsland, Llantwit Major, &c.

**MELISSA.** Cal. 2-lipped. Stam. diverging. Tube of cor. curved. Upper lip arched.

**M. OFFICINALIS.** Balm. L. oval serrate, whorls lax, bracts oval. Fl. white. Herb. Very rare. Near Cardiff. *New Botanist's Guide*. Not been able to find it myself.

**MELITTIS.** Cal. 2-lipped. Stam. parallel. Cal. of 3 broad leaves. Open in fruit. Fl. large.

**M. MELISSOPHYLLUM.** **Bastard Balm.** *Gwenynog.* L. cordate ovate, or ovate-lanceolate, serrate, hairy. Fl. large, cream and purple. Very rare. On ballast, Bute Docks only.

**PRUNELLA.** Cal. 2-lipped. Stam. parallel. Fl. in close, whorled, terminal heads. Upper lip of cal. 3 toothed; lower 2-toothed, closed in fruit. Filaments forked.

**P. VULGARIS.** **Self-heal.** *Meddyges las, Craith un nos.* L. oval or oblong, stalked. Bracts obcordate. Fl. purple, pink or white. Herb. June. Common. Everywhere.

**SCUTELLARIA.** Closed in fruit. Stamens parallel. Filaments simple. Fl. in distant axillary pairs. Cal. with 2 entire lips.

**S. GALERICULATA.** **Greater Skullcap.** *Cyccylog mwyaf.* L. oblong-lanceolate, opposite, rather distant. Fl. blue. Herb. Damp places. Not common. Banks of the Rhymney, Taff, and Ely Rivers, Pencoed, &c.

**S. MINOR.** **Lesser Skullcap.** *Cyccylog lleiaf.* Lower L. cordate-ovate, upper lanceolate. Fl. pinkish. Herb. July. Boggy places. Not common. Near New Cemetery, Llanishen, Rhymney Valley, Llangonoyd, &c.

#### 56.—BORAGINACEÆ.

**ECHIUUM.** Plant bristly. Cor. irregular. Stam. projecting beyond cor. Throat of cor. not closed by scales or valves.

**E. VULGARE.** **Viper's Bugloss.** *Gwiberlys cyffredin, Tafod y bwch, Bronwerth y wiber, Glesyn y wiber.* L. lanceolate, narrowed below. Stam. longer than cor. Fl. blue. Herb. June. Frequent. E. Moors, Penarth, Sully, &c.

**E. VIOLACEUM.** L. oblong, or narrowly cordate. Stamens about equalling the cor. in length. Fl. violet. Herb. Very rare. On the ballast banks. Occasionally.

**PULMONARIA.** Cal. 5-toothed, not cleft half-way. Stam. not projecting beyond cor. Throat of cor. without scales or valves.

**P. OFFICINALIS.** **Lung Wort.** *Llaeth bron Mair.* L. ovate or cordate, mostly with whitish blotches. Fl. purple. Herb. May. Woods. Rare. Coedriglan, Wenvoe, Dunraven, &c.

**LITHOSPERMUM.** Cal. 5-cleft almost to base. Stamens not projecting from cor. Throat of cor. without scales or valves. Cor. funnel-shaped.

**L. OFFICINALE.** **Common Gromwell.** *Maenhad meddygawl, Grawn yr haul.* L. lanceolate, acute. Carpels smooth, very hard, 4-seeded. Cor. yellowish, scarcely longer than cal. Herb. May. Rare. E. Moors, Barry, Llantrithyd, &c.

**L. ARVENSE.** **Corn Gromwell.** *Maenhad yr ar, Grawn y llew.* L. lanceolate, obtuse. Carpels wrinkled, very hard. Cor. white, scarcely longer than cal. Herb. May. Rare. E. Moors, Penarth, Ferry, &c.

**L. PURPURO-CERULEUM.** **Purple Gromwell.** L. lanceolate, acute. Carpels smooth. Cor. blue, much longer than the cal. Barren stem creeping. Herb. July. Woods near coast. Rare. Barry, Porthkerry, Bulwarks, Boverton, Dunraven.

**BORAGO.** Cor. rotate. Anthers in a cone, closing throat of cor. Filament forked, one branch bearing the anther.

**B. OFFICINALIS.** **Borage.** *Glesyn, Bronwerth.* Plant erect, branched. L. obovate or oblong, upper sessile. Fl. blue. Herb. Waste places. Rare. E. Moors. Llandough, Pwllypant, Llantrithyd, &c.

A *white var.*, not uncommon near St. Donat's.

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**LYCOPSIS.** Plant bristly. Nuts wrinkled. Filaments simple, tube of cor. crooked, throat of cor. closed.

**L. ARVENSIS.** **Bugloss.** *Tafod yr ych culddail, Bleidd-drem.* Stem erect. L. lanceolate, wavy. Fl. small, blue. Herb. June. Loose ground. Not common. E. Moors, Sully, St. Fagan's, &c.

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**SYMPHYTUM.** Cor. tubular, enlarged about middle, tube straight; throat closed by 5 lanceolate, subulate scales.

**S. OFFICINALE.** **Common Comfrey.** *Cyfardwf, Llys y cwllwm.* L. ovate-lanceolate, upper lanceolate very decurrent, bristly, hairy. Racemes of fl. in parallel pairs, involute when young. Fl. yellowish, white, or purple. Herb. June. Frequent. Banks of Feeder, Cooper's Fields, &c.

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**ASPERUGO.** Fl. axillary, solitary. Cal. with 5 large and 5 small teeth. Cor. with 5 obtuse scales in throat.

**A. PROCUMBENS.** **Madwort.** *Cyngafan mwyaf.* L. usually in threes. Stem prostrate, angled, with reflexed bristles. Fl. blue. Herb. June. Very rare. A few specimens on the ballast only.

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**CYNOGLOSSUM.** Cal. regularly 5-fid. Scales of cor. obtuse. Nuts covered with hooked prickles.

**C. OFFICINALE.** **Hound's Tongue.** *Pigyl meddygawl, Tafod y bytheuad.* L. downy hoary, lower ovate-lanceolate, stalked; upper lanceolate, clasping. Fl. purple, racemose, paniced. Herb. June. Frequent on the coast. Penarth, Sully, Pontigary, Leys, Dunraven, Southerndown.

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**ANCHUSA.** Cor. with obtuse scales. Cal. 5-fid, regular. Nuts wrinkled. Fl. in leafy racemes.

**A. SEMPERVIRENS.** **Evergreen Alkanet.** *Llys y gwrid.* L. oval. Fl. in short axillary forked spikes, blue. Herb. May. Waste ground. Frequent. Penarth, Llandaff, Dusty Forge, St. Fagans, Bridgend, &c.

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**MYOSOTIS.** Cor. with obtuse scales. Nuts smooth, polished. Fl. in leafless racemes.

**M. PALUSTRIS.** **Water Forget-Me-Not.** *Ysgorpionllys y gors.* Hairs of stem spreading. Teeth of cal. short, triangular, spreading in fruit. Limb. of cor. broader than length of tube. Fl. blue. Herb. June. Not common. Wet places. Llanishen, St. Fagans, Culverhouse, Cadoxton, &c.

**M. REPENS.** **Creeping Water Forget-Me-Not.** Like the last, but with teeth of cal. narrow-lanceolate, and flower scarcely so large, and more scattered. Common in wet places. E. Moors, Grangetown, Leckwith, St. Fagans, &c.

**M. CAESPITOSA.** **Tufted Water Forget-Me-Not.** Smaller flowers than last species. Hairs of stem adpressed. Pedicel longer than cal. Common in wet places, with the last.

**M. SYLVATICA.** Wood Forget-Me-Not. Fl. large. Cal. closed in fruit, with hooked hairs. Limb of cor. flat, large, blue. Very rare. Coedriglan Woods. No doubt planted.

**M. ARVENSIS.** Field Scorpion Grass. Cal. closed in fruit. Limb of cor. concave, not broader than length of tube. Pedicel longer than cal. Fl. blue. Herb. May. Fields. Common. Penarth, St. Fagans, &c.

**M. VERSICOLOR.** Yellow and Blue Scorpion Grass. Like the last, but pedicel shorter than cal. Fl. yellow, then blue. Herb. Frequent. On old walls. Llandaff, St. Fagans, Caerau, Wenvoe, &c.

#### 57.—LENTIBULARIACEÆ.

**PINGUICULA.** L. all radical. Cal. 5-fid, 2-lipped.

**P. VULGARIS.** Common Butterwort. *Toddaidd melen cyffredin.* Spur linear, obtuse, not so long as cor. Middle segment of lower lip entire, upper lip much smaller than lower. Fl. violet. L. with incurved edges, of a buttery or greasy appearance. Herb. June. Not common. St. Fagans, Rhondda and Llynvi Valleys, near Llangonoyd, &c.

**P. LUSITANICA.** Portuguese Butterwort. L. as last, but smaller and paler. Spur curved, obtuse. Capsule globose. Segments of cor. nearly equal. Peduncle hairy. Fl. pale lilac. Herb. June. Rare. Near Llangonoyd.

**UTRICULARIA.** L. submersed or floating, in capillary segments, with small bladders.

**U. VULGARIS.** Common Bladderwort. *Chwysigenwraidd cyffredin.* Spur conical. Fl. large, yellow. Upper lip of cor. not longer than lower lip. L. many cleft, bladders on the leaves. Herb. July. Rare. Ditches. Canton Common, Leckwith Common, Grange-town, &c.

**U. MINOR.** Lesser Bladderwort. *Chwysigenwraidd y lleiaf.* Spur very short. Fl. small, yellow. Lips nearly equal. L. many cleft, bladders on the leaves. Herb. June. Bogs. Very rare. Llyn Vach, near Hirwain.

#### 58.—PRIMULACEÆ.

**GLAUX.** Fl. axillary, sessile. Cal. campanulate, coloured. Cor. none.

**G. MARITIMA.** Black Saltwort, Sea Milk Wort. *Hel-las.* L. opposite, ovate, glabrous, entire. Fl. pink. Herb. June. Salt Marshes. Common. Penarth, Sully, Barry, &c.

**ANAGALLIS.** Cal. and cor. 5-fid. Cor. rotate. Stam. 5. Fl. stalked.

**A. ARVENSIS.** Pimpernel. *Brathlys gwrryw, Gwlyddyn Mair, Llys y crymman.* L. oval, opposite, dotted beneath. Fl. red. Herb. Common. June. Cornfields, &c. Near Cardiff, Llandaff, St. Fagan's, &c.

**A. CERULEA.** Blue Pimpernel. L. ovate-lanceolate, dotted beneath. Stems mostly erect. Fl. blue. Herb. June. Rare. On the ballast, Cardiff, and in cornfield near Lavernock.

**A. TENELLA.** Bog Pimpernel. *Gwlydd Mair y gors.* L. small, roundish, opposite. Cor. bell-shaped, streaked, pale and dark pink. Herb. June. Frequent. In bogs. Llanishen, Pontypridd, Caerphilly, Coedriglan; near Llangonoyd and Hirwain, very abundant.

**LYSIMACHIA.** Cal. and cor. 5-fid. Cor. rotate. Fl. stalked. Stam. 5.

**L. VULGARIS.** Common Loosestrife. *Trewynyn cyffredin*. L. ovate or ovate-lanceolate, opposite or whorled. Fl. yellow, in terminal panicle, sometimes axillary. Stem erect. Peduncles, many-flowered. Herb. July. Rare. Riversides. Llandaff, Pwllypant, St. Fagans, Llantwit Major.

**L. NUMMULARIA.** Creeping Jenny. *Trewynyn ymlusgaidd*. Stem procumbent. Peduncle short, 1-flowered, solitary, axillary. L. roundish, oval, opposite. Fl. large, yellow. Cal. segments, broadly-ovate. Herb. July. Damp hedge banks. Not common. Llanishen, St. Nicholas, Pencoe, Tondy, &c.

**L. NEMORUM.** Wood Pimpernel. *Trewynyn y gædwig, Gwlydd melyn Mair*. L. ovate, opposite. Fl. small, yellow. Cal. segments linear-lanceolate. Stem procumbent. Peduncle long, 1-flowered, solitary, axillary. Herb. May. Woods. Common. Llanishen, Penylan, Llandaff, St. Fagans, &c.

**PRIMULA.** L. all radical. Cor. salver-shaped. Tube cylindrical. Scape simple, or umbellate.

**P. VULGARIS.** Primrose. *Briallu, Tewbannog fechan*. L. wrinkled, spatulate. Peduncle 1-flowered. Fl. yellow. Limb of cor. flat. Herb. March. Hedge banks, &c. Common in the district.

**P. ELATIOR.** Oxslip. *Briallu Mair disawr*. Fl. umbellate, yellow. Lobes of cor. nearly square. Cal. teeth lanceolate. Herb. May. Meadows. Not common. Cogan, St. Fagans, St. George's.

**P. VERIS.** Cowslip. *Briallu Mair Sawyrus, Dagrau Mair, Llys y parlys*. Fl. orange yellow, umbellate, nodding. Limb of cor. concave. Cal. teeth ovate, short. Herb. May. Meadows. Frequent. Lavernock, Cogan, St. Fagan's, Peterstone, Gigman, &c.

**CYCLAMEN.** Tube of cor. campanulate or globose. Segments of limb reflexed.

**C. HEDERÆFOLIUM.** Sowbread. *Llys y ddidol, Bara'r Hwch, Egel*. L. radical, angular, heart-shaped, toothed. Root a tuber. Fl. flesh-colour. October. Coedriglan Woods. No doubt planted.

**SAMOLUS.** L. alternate. Fl. small, in a terminal raceme. Stam. 5. Cal. and cor. 5 cleft.

**S. VALERANDI.** Brookweed. *Claerlys, Sammwyl, Samylen*. Stem erect. L. obovate to oblong, obtuse. Fl. white. Herb. Wet places occasionally. Pwllypant, Barry, Boverton, Dunraven, &c.

#### 59.—PLUMBAGINACÆ.

**STATICE.** Fl. on unilateral spikes. Scape branched.

**S. LIMONIUM.** Sea Lavender. *Llemyg*. L. lanceolate 1-ribbed, with lateral veins. Flowering panicle corymbose, broad. Flowers crowded at the ends of branches, blue. Herb. July. Salt Marshes. Frequent. Mouths of the Rumney, Ely, and Thaw Rivers, Barry, &c.

**S. DODARTII.** Lesser Sea Lavender. L. spatulate, mostly 3-ribbed below, no lateral veins, small and sharp-pointed. Spikes thick, rather short. Fl. blue. Herb. July. Salt Marshes. More common than last species, in the same localities.



ARMERIA. Fl. in a terminal globular head.

A. MARITIMA. Sea Thrift. *Clustog Fair, Archmain*. L. linear, 1-nerved. Scape downy. Cal. teeth short, acute. Herb. April. Sea coast. Frequent. E. Moors, Penarth Sully, Barry, &c.

## 60.—PLANTAGINACEÆ.

PLANTAGO. Fl. perfect, in spikes. Capsule 2-4 seeded.

P. MAJOR. Greater Plantain. *Dail llydan y fford, Henllydan y fford, Lyriad mwyaf*. L. entire, oval, ascending on longish channeled petioles. Spikes linear. Flower whitish. Stam. 4, pinkish. Herb. June. Common. On waste ground. Everywhere.

P. MEDIA. Hoary Plantain. L. broad, prostrate; whole plant hoary. Petioles winged, short. Spikes cylindrical, short. Anthers when fresh, lilac. Fl. scarious. Herb. June. Frequent, on the lias, near the coast line. Penarth, Sully, &c., to Southerndown.

P. LANCEOLATA. Rib Wort Plantain. *Dail llwyn y neidr, Astyllenlys, Pennaw'r gwyr, Lyriad Llwynhidydd, Traeturiad y bugeilydd*. L. lanceolate, 5-ribbed. Spike oval or cylindrical, short. Fl. whitish. Herb. May. Common. In fields. Everywhere.

P. MARITIMA. Sea Plantain. *Bara can y defaid, Lyraid y mor. Gwero, man y don, Sampier y ddafad*. L. linear channelled, fleshy. Spike cylindrical. Fl. whitish. Herb. June. Near the sea coast. Plentiful. Everywhere.

P. CORONOPUS. Buck's Horn Plantain. *Lyriad corn y Carw, Llys Efa*. L. prostrate, pinnatifid or deeply toothed, hairy. Spikes cylindrical. Herb. June. Common near the sea. Penarth, Barry, Sully, &c.

LITTORELLA. Fl. monœcious. Capsule 1-seeded.

L. LACUSTRIS. Plantain Shoreweed. *Beisdonell merllyn*. Plant small, about 2 inches high. L. linear, all radical. Fl. scarious. Stamens 4. Female fl. with a very long style. Herb. June. Margins of lakes. Rare. Llyn Vawr.

## EXOGENS—MONOCHLAMYDEÆ.

### 61.—AMARANTHACEÆ.

AMARANTHUS. Monœcious or polygamous. Perianth 3 to 5 fid. Ovary superior.

A. BLITUM. Wild Amaranth. *Blodau Ammor*. Stem ascending, spreading branched. Fl. in axillary clusters and a terminal spike. Stamens 3. Fl. greenish. Herb. August. Frequent on ballast banks. At Cardiff, Penarth, and Barry.

A. RETROFLEXUS. Stem erect, very compound. Fl. greenish. Stam. 5. Herb. September. Rare. On ballast banks at Cardiff and Penarth.

## 62.—CHENOPODIACEÆ.

**SALICORNIA.** L. none. Stem jointed. Fl. in threes, immersed in upper joints of the stem. Stam. 1-2.

**S. HERBACEÆ.** Marsh Samphire. *Llyrllys llysieuaidd.* Herbaceous, mostly erect, joints thickened upwards. Herb. August. Mudbanks, near tidal rivers. Common. Ely, near Penarth, Barry, Aberthaw, &c.

**S. RADICANS.** Creeping Marsh Samphire. Stem woody below, procumbent. Joints not thickened upwards so much as last species. Shrubby. August. Abundant, near Barry.

**SUEDA.** Plant with distinct leaves. L. round or semi-cylindrical, not ending in a thorn. Perianth not altered in fruit.

**S. MARITIMA.** Sea Blite. L. often acute. Stem prostrate or spreading, rarely erect. Styles 2. Fruit reticulate. Herb. July. Frequent. Penarth and Grangetown.

**S. FRUTICOSA.** Shrubby Sea Blite. L. obtuse. Stem shrubby, mostly erect. Styles 3. Fr. smooth. Fl. greenish. Shrubby. July. Sea coast, Flat and Steep Holmes, Cogan Pill, &c.

**SALSOLA.** L. with thorny points. Perianth with a membranaceous wing in fr.

**S. KALI.** Prickly Salt Wort. *Hel-lys yspigawg.* Stem prostrate, much branched. Fl. axillary. Herb. July. Sea shores. Frequent. Penarth to Southerndown.

**CHENOPODIUM.** Plant with distinct flattened leaves. Perianth 5 (rarely 2-3) fid. Fl. usually perfect. Cal. not fleshy in fr. Fr. lenticular. Stam. 5. Pistils 2, usually.

**C. OLIDUM.** Stinking Goose Foot. L. ovate, entire, not angular, mealy, stalked, fœtid. Spikes short, crowded. Fl. greenish. Herb. May. Shore. Frequent. Near Sully Isle.

**C. POLYSPERMUM.** Many-seeded Goose Foot. L. ovate, entire, not angular, not mealy, sessile. Spikes long, branched. Fl. greenish. Herb. May. Waste places. Frequent. G. W. R. Embankment, near Cardiff Docks and Penarth.

**C. BONUS HENRICUS.** Mercury Goose Foot. *Sawdl y crydd, Llys y gwrda.* L. hastate, triangular, nearly entire. Fl. in crowded, branched, terminal spikes, greenish. Herb. May. Waste ground. Not common. Allen's Bank, St. Athan, Bridgend, &c.

**C. ALBUM.** White Goose Foot. *Gwydd-droed gwynaidd.* L. mealy on both sides, oval or lanceolate, lower sinuate or toothed, upper entire. Plant usually erect. Fl. greenish. Herb. August. Waste ground. Common. Everywhere.

**C. GLAUCUM.** Oak-leaved Goose Foot. *Derwen Caersalem.* L. green above, white beneath, oblong, all sinuate, toothed. Stem procumbent. Fl. greenish. Herb. August. Waste ground and ballast banks. Frequent. Penarth Railway Embankment, &c.

**C. RUBRUM.** Red Goose Foot. Stem usually erect. L. not mealy, wedge-shaped at base, elongate rhomboid, usually much and acutely toothed. Perianth of lateral fl. 2-3 fid. Fl. greenish. Seeds very minute. Herb. August. Frequent. In waste ground, &c. About the Docks and Railways, Cardiff and Penarth, &c.

**C. FICIFOLIUM.** Fig-leaved Goose Foot. L. oblong, or oblong-lanceolate, sinuately toothed. Lobes and apex very obtuse. Fl. greenish. Waste ground. About docks, ballast banks. Common.

**C. HYBRIDUM.** Maple-leaved Goose Foot. L. bright green, not mealy, cordate-ovate, with few large acute teeth or lobes. Spikes leafless. Fl. greenish. Herb. July. Waste ground. Not common. On the ballast. Cardiff Docks.

**C. MURALE.** Nettle-leaved Goose Foot. L. broadly ovate, much and irregularly toothed, teeth acute. Spikes leafless. Fl. greenish. Herb. August. Railway embankments, &c. Not common. Ballast. Cardiff. Rare.

**C. URBICUM.** Upright Goose Foot. L. triangular-toothed, not mealy, margin of base sometimes hollowed out in the larger leaves. Spikes erect, nearly leafless. Fl. greenish. Herb. July. Frequent. On the ballast only.

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**BETA.** Cal. fleshy in fruit. Fr. reniform. Perianth 5-fid. Styles 2. Stam. 5.

**B. MARITIMA.** Sea Beet. *Melged arfor, Betysen.* L. ovate wedge-shaped, spikes leafy. Fl. green. Herb. June. Sea shores. Rare. Steep Holme. Fontigary, &c.

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**ATRIPLEX.** Fl. rarely perfect. Female fl. with 2 flat segments, much enlarged in fr. Male fl. with 5-fid. perianth.

*The form of segments of sepal must be observed in female fl. when seed is nearly ripe.*

**A. PORTULACOIDES.** Shrubby Orache. *Eurlllys, Llygwyn llyswyddaid.* L. all entire, obovate or obovate-lanceolate, obtuse, whitish grey. Mealy stem, rather shrubby. Fl. crowded, sessile spiked, yellowish. Salt Marshes. Abundant near Penarth Ferry.

**A. ARENARIA.** Frosted Sea Orache. *Llygwyn arianaidd, Llewgywn.* Stem prostrate, buff. L. ovate-triangular, sinuate very silvery-scaled. Sep. united below. Slightly toothed. Herb. August. Rarely. On the ballast only.

**A. BABINGTONII.** Stem procumbent or ascending, green, striped. L. hastate, more or less mealy, not scaly. Sepals united below. Scarcely toothed. Herb. August. Not common. Barry, Aberthaw, &c.

**A. PATULA.** Narrow-leaved Orache. *Llygwyn tryfal.* L. ovate, ovate-lanceolate, or lanceolate, teeth pointing upwards, scarcely mealy. Fl. greenish. Sep. united below, toothed distinctly. Waste ground. Occasionally about Cardiff and Penarth.

**A. LITTORALIS.** Grass-leaved Sea Orache. *Llygwyn afor.* Leaves not mealy, linear entire, rarely lanceolate, slightly toothed. Sep. united below, distinctly toothed. Herb. August. Sea coast. Frequent. Penarth, Barry, Aberthaw, &c.

### 63.—POLYGONACEÆ.

**RUMEX.** Fl. with double perianth resembling cal., and cor. of 3 outer small and 3 inner larger segments. Achene triquetrous. The species are chiefly distinguished by the perianth when the fruit is full grown.

**R. CONGLOMERATUS.** Sharp Dock. *Trython, Tafolen Mair, Chwysoglen.* Whorls of fl. mostly leafy, rather distant. Fl. green. Pet. ovate-lanceolate, acute, nearly entire, all with tubercles of nearly equal size. Herb. August. Wet places. Frequent. Canton and Leckwith Commons, St. Fagan's, &c.

**R. CRISPUS.** *Curled Dock.* *Tafolen grych.* L. lanceolate, wavy. Pet. cordate, entire or nearly so, one tubercled, the other two with rudimentary tubercles. Fl. greenish. Herb. August. Frequent. Generally through the district.

**R. SANGUINEUS.** *Bloody-veined Dock.* *Tafolen goch.* Whorls nearly leafless, somewhat distant. L. with red veins. Pet. obtuse, oblong, one tubercled. Fl. greenish or reddish. Herb. August. Not very common. Penarth, Barry, Merthyr Dovan, Aberthaw, &c.

Var. **VIRIDE**, frequent in the district, veins bright green instead of red.

**R. PULCHER.** *Fiddle Dock.* Stem straggling. Lower L. cordate-oblong, contracted in the middle to resemble a fiddle. Whorls distant, leafy. Pet. ovate, comb-toothed at base, one tubercled. Fl. greenish. Herb. August. Very rare. East Moors.

**R. OBTUSIFOLIUS.** *Broad-leaved Dock.* *Tafolen cyffredin, Tafolen lydan-ddail.* Stem erect, branches ascending. Whorls mostly leafless. L. cordate-oblong. Upper L. lanceolate. Pet. oval or oblong, one tubercled. Herb. August. Waste ground, about houses, &c. Common, almost everywhere.

**R. ACETOSA.** *Sorrel.* *Suran y waun, Suran y cwn, Suran y fran.* L. sagittate. Fl. red, diœcious. Sep. reflexed. Herb. May. Meadows, &c. Common, almost everywhere.

**R. ACETOSELLA.** *Sheep's Sorrel.* *Dringol, Drigon, Suran yr yd.* L. hastate. Fl. diœcious. Sep. erect. Fl. reddish. Herb. June. Dry ground. Common. Penarth, Lavernock, St. Fagan's, &c.

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**POLYGONUM.** Perianth of 5 nearly equal segments, red, white or pale green. Stam. 4-8. Pistils 2-3.

**P. MARITIMUM.** *Sea Knotgrass.* L. ovate-lanceolate, revolute at edge. Ochreæ or sheaths of L., with many dark, strong-forked nerves. Fl. all axillar, 1-3 together. Fr. shining, longer than cal. Fl. reddish. Herb. August. Not common. About Cardiff Docks and Penarth.

**P. RAIL.** *Ray's Knotgrass.* Stem prostrate. L. ovate-lanceolate, flat. Ochreæ with few simple nerves. Fl. all axillar, 1-3 together. Fr. shining, projecting from cal. Fl. reddish. Herb. August. Near the sea. Frequent all along the coast.

**P. AVICULARE.** *Knotgrass.* *Gwaedlys, Clymmog, Berwr yr iar.* Stem prostrate. L. ovate to linear. Ochreæ faintly nerved. Fr. dull, dotted, equalling the cal. Fl. whitish. Herb. May. Waste ground. Everywhere.

**P. CONVULVULUS.** *Black Bindweed.* *Yttag, Taglys yr yd, Perthlys.* Stem twining or climbing. L. cordate-sagittate. Fl. in racemes, greenish. Fr. dull, dotted. Herb. July. Fields, &c. Common over the whole district.

**P. BISTORTA.** *Snakeweed.* *Llys y neidr.* Stem erect. L. cordate-ovate. Fl. in dense, oblong, terminal spikes. Stam. 8. Fl. reddish white. Herb. June. Not common. Greenmeadow, St. Fagans, Hensol, &c.

**P. AMPHIBIUM.** *Amphibious Persicaria.* *Beidiawg Rudd, neu goch, Can-uraidd goch.* L. oblong, if floating, lanceolate if growing on land. Spike, dense, oblong. Stam. 5. Styles 2. Fl. rose colour. Herb. July. Ponds and waste ground. Frequent near Cardiff and Penarth.

**P. HYDROPIPER.** *Water Pepper.* *Tinboeth, Llys y din.* Stem erect. Ochreæ glandular, spikes terminal, mostly drooping. Stam. 6. Styles 2. Fl. red or green. Fr. large, dull, lenticular broadly ovate. Herb. August. Wet places. Frequent. Penarth Road, St. Fagans, &c.

**P. LAPATHIFOLIUM.** **Pale-Flowered Persicaria.** *Costog y dom, Llys y dom.* Stem mostly branched. L. ovate-lanceolate. Ochreae *not fringed*. Ped. and perianth glandular. Fl. white or greenish. Herb. July. Fields and waste ground. Frequent. Penarth Embankment, Leckwith Common, Dumballs, &c.

**P. PERSICARIA.** **Spotted Persicaria.** *Elinog goch.* Stem branched. Ochreae fringed. Fl. in dense cylindrical spikes, rose colour. L. lanceolate, often spotted. Ped. and perianth glabrous. Herb. July. Damp places. Frequent. Roath, Dumballs, Grangetown, &c.

**P. FAGOPYRUM.** **Buckwheat.** *Gwenith yr hydd. Gwenith y bwch.* Stem erect. L. cordate sagittate. Fl. paniced, reddish white. Styles 3. Herb. July. On the ballast. Cardiff Docks. Frequent.

## 64.—SCLERANTHACEÆ.

**SCLERANTHUS.** Plant much branched. Leaves linear.

**S. ANNUUS.** **Annual Knawell.** *Dinodd blynyddawl.* Cal. teeth acute, scarious on margin. Fl. greenish. Herb. July. Frequent. Sandy places. All over district.

**S. PERENNIS.** **Perennial Knawell.** Cal. teeth obtuse, with a broad white membranous border. Herb. June. Sandy places. Only on the ballast. Cardiff Docks.

## 65.—THYMELÆCEÆ.

**DAPHNE.** Fl. 4-fid. Stam 8.

**D. LAUREOLA.** **Spurge Laurel.** *Clust yr Ewig.* L. evergreen, ovate, lanceolate, crowded at top of stem, Racemes about 5-flowered, axillary. Fl. yellowish green. Shrub. April. Frequent. Cogan Pill, Penarth, Porthkerry, Gigan Bridge, Llantwit Major, &c.

**D. MEZEREUM.** **Spurge Olive.** L. deciduous, lanceolate. Fl. in threes, purple, appearing before leaves. Shrub. February. Very rare. Fairwater, and St. Fagan's—[*Iolo Morganwg*]. Now extinct in both places.

## 66.—SANTALACEÆ.

**THESIUM.** Fl. 4-5 fid., each with 3 linear bracts.

**T. HUMIFUSUM.** **Bastard Toad Flax.** L. linear-lanceolate. Fl. small, whitish. Cor. toothed. Herb. July. Very rare. Growing abundantly at Cwrt-y-fil, in ground newly broken up.

## 67.—EMPETRACEÆ.

**EMPETRUM.** Dioecious. Stam. 3. Stig. 6.

**E. NIGRUM.** **Crakeberry.** *Creiglys.* L. linear-oblong, evergreen, edges revolute. Fl. minute, red, sessile, axillary. Very small shrub. May. Very rare. St. Lythan's Down—[*Dillwyn*]. I have searched there for this plant in vain.

68.—EUPHORBIACEÆ.

**BUXUS.** Shrub, with shining evergreen leaves. Fl. monœcious. Stam. 4. Pist. 3.

**B. SEMPERVIRENS.** Box. *Pren Boccys, Ysbeinwydd.* L. ovate-oblong. Fl. green, clustered, axillary. Frequent, but not indigenous.

**EUPHORBIA.** Herbaceous, with deciduous, mostly alternate leaves. Ovary of 3 carpels, with a curved pedicel. Styles 3. Juice milky.

**E. PEPLUS.** Petty Spurge. *Llaeth y cythraul, Fflamgoed fechan.* L. obovate, entire. Umbel 2-3 rayed. Seeds rough or pitted. Fl. yellowish green. Herb. August. Common in cultivated fields. Penarth, Lavernock, St. Fagan's, &c.

**E. EXIGUA.** Dwarf Spurge. *Fflamgoed eiddil flaenfain.* L. linear, entire, scattered. Umbel 3, sometimes 4-rayed. Fl. yellowish green. Herb. August. Frequent in cultivated ground. Penarth, Llandaff, &c.

**E. LATHYRIS.** Caper Spurge. L. narrow, oblong, cordate at base, in 4 rows. Stem about a yard high. Bracts heart-shaped. Umbel 4-rayed. Fl. reddish-green. Herb. May. Rare. Steep Holme.

**E. PARALIAS.** Sea Spurge. *Llys y famaeth.* Stems many. L. oblong to lanceolate, glabrous, tiled, very numerous, entire. Bracts ovate-cordate. Umbel 5 to 6 rayed. Fl. yellowish. Herb. August. Shore. Frequent. Penarth, Barry, Aberthaw, Leys, Llantwit Major.

**E. AMYGDALOIDES.** Wood Spurge. L. oblong-lanceolate, entire, hairy, crowded about middle of stem. Bracts perfoliate. Umbel 5-6 rayed. Seeds smooth. Fl. yellowish. Herb. April. Woods. Occasionally. Cogan, Cwm George, Llandaff, Duffryn Golach, &c.

**E. HELIOSCOPIA.** Sun Spurge. *Llaeth ysgyfarnog, Llaeth y Cythraul, Dalen dda.* L. obovate, obtuse, serrate at end. Umbel about 5-rayed. Carpel glabrous. Seeds netted. Fl. yellowish. Herb. June. Cultivated ground. Common in the district.

**E. PLATYPHYLLA.** Broad-leaved Warted Spurge. L. ovate, acute, serrate. Stem slightly branched. Umbel 3-5 rayed. Fruit tubercled. Stam. 7-8 in each inv. Fl. yellowish. Herb. July. Cliffs near Lavernock.

**E. STRICTA.** Bushy Warted Spurge. Stem much branched. L. broadly lanceolate, acute, serrate. Umbel 3-5 rayed. Fruit tubercled. Stam. 2 in each inv. Herb. July. Very rare. Near Penarth Church, plentifully.

**E. CYPARISSIAS.** Cypress Spurge. Umbel with many rays. L. linear, entire, crowded. Fl. yellowish-green. Herb. June. Frequently on the ballast. Near the Dumballs.

**MERCURIALIS.** Monœcious or diœcious. L. opposite. Ovary 2-celled. Styles 2. Juice not milky.

**M. PERENNIS.** Perennial Dog's Mercury. *Blaen yr iwrch, Bresych y cwn, Cwlwm yr asgwrn, Clais yr hudd.* Stem simple. L. ovate, roughish. Fl. green. Herb. Woods. Common, everywhere in district.

**M. ANNUA.** Annual Dog's Mercury. *Clais yr hudd blyneddawl.* Stem branched. L. ovate, glabrous. Fl. green. Herb. July. Waste places. Rare. About Grangetown, Penarth and Cogan.

## 69.—CALLITRICHACEÆ.

**CALLITRICHE.** Perianth absent. Styles 2. L. opposite. Water plants.

**C. VERNA.** Vernal Water Starwort. *Brigwlydd gwanyawl, Llinhesg y dwr.* Floating L. obovate or spatulate; submersed L. linear. Bracts 2, falcate. Water herb. June. Ditches. Common throughout district.

**C. AUTUMNALIS.** Autumnal Water Starwort. *Brigwlydd cynauafawl.* L. all linear, broadest at base, abrupt at point. Lobes of fr. winged at back. Bracts O. Waterherb. Autumn. Ditches. Leckwith Common, Cadoxton Moors, &c.

## 70.—URTICACEÆ.

**HUMULUS.** Dioecious. L. opposite. Male Fl. perianth 5-fid. Female Fl. in axil of scales forming a cone.

**H. LUPULUS.** Hop. *Pensoeg, Llewig y blaidd.* L. broadly heart-shaped, 3-5 lobed, rough. Stem herbaceous, climbing. Fl. pale green. Herb. July. Hedges. Not common. Cathedral Road, Llandaff, Penarth, St. Fagan's, &c.

**URTICA.** Erect stinging herbs. Monoecious or dioecious. L. opposite. Male fl. 4-fid. Stam. 4. Female fl. 2-fid.

**U. PILULIFERA.** Roman Nettle. *Dynhaden belaid.* L. ovate, deeply serrate. Female fl. and fr. in globose, axillary stalked heads, about one-third of an inch diameter. Fl. green. Herb. July. Rarely on the ballast, Cardiff and Penarth.

**U. URENS.** Small Nettle. *Dynhaden lleiaf.* Monoecious. L. ovate, deeply serrate, spikes simple, axillary. Fl. green. Herb. June. Waste ground. Common in district.

**U. DIOICA.** Common Nettle. *Dynhaden ysgar, Dynhaden fwyaf.* Dioecious. L. cordate, serrate, spikes axillary, branched. Fl. green. Herb. July. Common in waste ground in the district.

**PARIETARIA.** Leaves alternate, entire. Stamens 4, irritable.

**P. OFFINALIS.** Pellitory of the Wall. *Canhauawl, Cantafawd, Pelydr y gwelydd, Barthlys, Murlwyn.* L. ovate or ovate-lanceolate, stalked. Fl. about 5 together, in an involucre. Fl. greenish. Herb. June. Old walls, &c. Frequent. Leckwith Bridge, Llandaff, Caerphilly, &c.

## 71.—ULMACEÆ.

**ULMUS.** Fl. perfect, clustered. Perianth 4-5 cut. Stam. 5. Pist. 2.

**U. MONTANA.** Wych Elm. *Llwyfanen lydanddail.* Wing of fr. slightly notched at top, seed about middle of wing. Tree. Frequent, but no doubt always planted.

**U. SUBEROSA.** Common, or English Elm. *Llwyfain Rhufain, Llwyf cyffredin.* Wing of fr. deeply notched at top, notch reaching nearly to seed. Tree. Frequent. No doubt always planted.

## 72.—AMENTIFERÆ.

**ALNUS.** Monœcious. Male catkin long, pendulous, scales 3-lobed, 3-flowered. Stam. 4. Female catkin ovate, scales oval, woody in fruit.

**A. GLUTINOSA.** Alder. *Gwernen.* L. roundish, serrate, glutinous. Fl. brown. Tree. March. Near water. Common. Banks of the Rumney, Taff, and Ely Rivers, &c.

**BETULA.** Monœcious. Male catkin long, and pendulous, scales ternate, with 8-12, stamens not in distinct fl. Female catkin cylindrical, close, scales 3-fid. 3-flowered.

**B. ALBA.** Birch. *Bedwen, Bedw.* L. rhomboid oval, serrate, scented, outer bark whitish. Fl. greenish yellow. Tree. May. Woods. Frequent, Probably mostly planted. Glyn Corwg, probably wild.

**CARPINUS.** Monœcious. Male catkin cylindrical, scales broad. Stam. about 12. Female catkin loose, leafy. Bracts large, 3-lobed in fr.

**C. BETULUS.** Hornbeam. *Oestruyddden.* L. ovate, plaited when young, doubly serrate. Fl. greenish. Tree. May. Hedges. Occasionally. Near the Four Elms, Roath, Llanishen, St. Fagans, &c.

**QUERCUS.** Monœcious. Male catkin pendulous, loose, interrupted, fr. a 1-celled nut in a cup-like involucre (acorn).

**Q. ROBUR.** Oak. *Derwen goesog.* L. oblong, sinuately lobed, acorn on a stalk. Fl. greenish. Tree. April. Woods. Common. Mostly planted.

**Q. SESSIFLORA.** Sessile Fruited Oak. *Derwen ddigoesog.* Acorns sessile. Tree. Nearly as common as last species. In same localities.

**FAGUS.** Monœcious. Male catkin globose, pendulous. Female fl. 2-3, in a many-scaled involucre. Nuts 2-3, triquetrous, in a 4-valved prickly involucre.

**F. SYLVATICA.** Beech. *Ffawyddden.* L. ovate, nearly entire, glabrous, silky when young. Tree. Woods, only when planted.

**CASTANEA.** Monœcious. Male catkin very long, cylindrical, interrupted. Perianth 6-flowered. Female fl. 3, in a 4-lobed involucre. Nuts 1-2 rounded, in a prickly involucre.

**C. VULGARIS.** Sweet Chestnut. *Castanwydden, Sataen.* L. oblong-lanceolate, glabrous, acuminate-serrate. Fl. yellowish green. Tree. Frequent, only where planted. Penylan, Llanishen Road, &c.

**CORYLUS.** Monœcious. Male catkin long, cylindrical, pendulous, scales 3-lobed. Female fl. several in a scaly bud-like involucre. Styles 2, red.

**C. AVELLANA.** Hazel. *Collen, Coll-lwynn.* L. roundish-cordate, cuspidate, stipuled. Small tree. March. Very common in hedges and woods everywhere.



**POPULUS.** Diccious. Male and female fl. in catkins. Scales of catkins jagged. Fruit with cottony hairs. L. with long petioles.

**P. NIGRA.** Black Poplar. *Aethnen ddu, Pwpleren.* L. triangular in outline, serrate, glabrous on both sides. Tree. March. Common. In woods, &c. Mostly planted.

**P. TREMULA.** Aspen. *Aethnen, Aethwydden, Crydaethnen.* L. roundish in outline, irregularly toothed, glabrous on both sides. Petioles very long, and much flattened. Tree. April. Frequent. Penarth, Sully, Llandaff, &c.

**P. ALBA.** White Poplar. *Aethnen wen.* L. roundish heart-shaped, lobed, toothed, white or cottony beneath. Stigmas 2, bifid, yellow.

**P. BALSAMIFERA.** Balm of Gilead Poplar. Near Greenmeadow. Probably planted.

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**SALIX.** Scales of catkins entire. L. with long petioles.

*About this genus there exists great differences of opinion, among botanists, as to the limits of the various species, the intermediate links being so close between them in many cases. It is most probable that this genus is one of those now undergoing a process of segregation, with the evolution of new species, although our records are too fragmentary to indicate when or whence every individual form took its rise. To beginners, the genus has many difficulties.*

**S. PENTANDRIA.** Bay-leaved Willow. *Helygen beraroglaidd.* L. ovate-lanceolate, glabrous, shining, serrate, glandular, scented. Catkins on a leafy branch, appearing at same time as leaves. Stam. 5. Large shrub. June. Not common. St. Fagans, St. Georges, Peterstone, &c.

**S. TRIANDRIA.** Triandrous Willow. *Helygen deirgworryw hirddail.* L. ovate-lanceolates to lanceolate-serrate. Stipules kidney-shaped, blunt. Scales of catkin withering, but not falling off. Stamens mostly 3. Catkins on a leafy branch, appearing at same time as the leaves. Tree. Not common. Near Leckwith Bridge.

**S. FRAGILIS.** Crack Willow. *Helygen frau.* L. lanceolate, glabrous beneath. Petioles glandular. Stipules half-cordate. Catkins on leafy branches, appearing with the leaves. Stamens mostly 2. Branches brittle at the axil. Tree. Frequent. Sophia Gardens, Cooper's Fields, &c.

The variety called the *Welsh White Willow* does not seem to occur in the district even planted.

**S. ALBA.** White Willow. *Helygen wen.* L. ov.-lanceolate, glandular-serrate, silky on both sides when young. Catkins on leafy branches, appearing same time as leaves. Large tree. Woods, &c. Frequent in district.

**S. VIMINALIS.** Osier. *Helygen afonawl.* L. linear, white, or silky beneath. Stipules minute, lanceolate. Caps. subulate-lanceolate, sessile. Shrub planted in moor grounds, near St. Georges. Occasionally in the Vale of Glamorgan, Sully Moors, &c.

**S. AURITA.** Wrinkled-leaved Sallow. L. obovate, or obovate-lanceolate, downy, wrinkled above. Margins slightly reflexed. Stipules large, roundish, stalked. Tree. April. Frequent. Leckwith, St. Fagans, &c.

**S. CAPREA.** Great Sallow. *Helygen grynddail fwyaf.* L. roundish-obovate, wavy at edge, downy above, wooly beneath. Catkins oval. Stipules kidney-shaped. Shrub. April. Frequent. Leckwith Woods, &c.

**S. NIGRICANS.** Dark-leaved Sallow. Catkins sessile, mostly appearing after the leaves are expanded. L. obovate to lanceolate, young leaves and shoots very downy, old leaves hairy, turning very dark in drying. Shrub. Not common. Near Llanishen Waterworks.

**S. REPENS.** Dwarf Willow. *Helygen y cwn, Cor Helygen*. Stem creeping, subterraneous, decumbent. L. varying from ovate-lanceolate to linear-lanceolate, smooth above, silky beneath. Stam. 2. Shrub. Common on heaths everywhere

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**MYRICA.** Catkins short, sessile, erect. L. dotted with resinous glands.

**M. GALE.** Sweet Gale, Bog Myrtle. *Madywydd, Mordwydd, Bwrli, Gwyrddling, Helygen Mair*. Stem erect. L. lanceolate. Plant fragrant. Shrub. May. Bogs. Not common. Near Llanishen, Bryn Garw, Llangonoyd.

### 73.—CONIFERÆ.

**PINUS.** Each scale of male catkin with 2 anther cells. Female catkin in fr. a dry cone, with 2 winged seeds to each scale.

**P. SYLVESTRIS.** Scotch Fir. *Pinwydden wylli, Ffynidwydd*. L. 2 in a sheath. Cones pendulous, usually in pairs. Points of scales deflexed. Tree. Frequent. Probably always planted in this district.

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**JUNIPERUS.** Male catkin small. Each scale with 4 anther cells. Fruit a 2-3 seeded berry.

**J. COMMUNIS.** Juniper Bush. *Beryw, Berw, Berwydd, Merywen*. Stem erect, branched. L. 3 in a whorl. Linear stiff, sharp-pointed, longer than the fruit. Berries globose. Shrub. Not common. Barry Island, Hirwain Common.

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**TAXUS.** Male catkin small. Each scale with about 6 anther cells. Fruit, a seed, partly immersed in a berry-like cup.

**T. BACCATA.** Yew Tree. *Ywen, Pren-Yw*. L. linear, shiny in 2 rows. Fl. axillary. Tree. Frequent in district. Very abundant near St. Andrew's and Wenvoe.

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## ENDOGENS—DICTYOGENS.

### 74.—TAMACEÆ.

**TAMUS.** Male fl. 6 cleft. Stam. 6 Female fl. with 3-celled inferior ovary. Stigmas 3.

**T. COMMUNIS.** Black Bryony. *Afal Adda, Gwinwydden ddu, Rhwymyn y coed, Paderau'r gath.* L. cordate, but very variable. Shining fl. in axillary racemes, greenish. Climbing herb. Common in hedges, &c. In district.

### 75.—TRILLIACEÆ.

**PARIS.** Sep. usually 4. Pet. usually 4 filiform. Stamens 8.

**P. QUADRIFOLIA.** Herb Paris. *Cwlwm cariad.* L. oval, whorled, usually 4, sometimes 5 or 6. Fl. greenish, solitary, terminal. Herb. May. Frequent in woods. Coedriglan, Cwm George, Llanishen, Lisvane, St. Fagan's, &c.

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## ENDOGENS—PETALOIDEÆ.

### 76.—ORCHIDACEÆ.

**HABENARIA.** Fl. with a spur, sepals and petals converging. Lower lip 3-pointed or entire. Anther cells without a beaked process between their bases.

**H. BIFOLIA.** Butterfly Orchis. *Tegeirian dwyddalenawg.* Root L. usually 2, oval or oblong. Lower lip of fl. entire. Spur very long, slender, equal throughout. Anther cells parallel. Fl. white. Herb. June. Not common. St. Fagan's, St. George's, Boverton, &c.

**H. CHLORANTHA.** Great Butterfly Orchis. Root L. oval or oblong, usually 2. Spur very long, thickened at the tip. Lower lip of cor. entire. Anther cells diverging. Fl. white. Herb. June. Woods. Rare. Sully Wood, St.-y-Nyll.

**H. VIRIDIS.** Green Frog Orchis. *Llys ysgyfarnog, Baldar blodeuwyrdd.* L. ovate, upper lanceolate. Spur short like a pouch, slightly notched. Lower lip of cor. 3-toothed. Fl. green. Herb. June. Rare. Near Llantrithyd, Hirwain.

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**GYMNADENIA.** Lower lip 3-fid, middle segment rounded, entire. Anther cells parallel at base, with a beaked process between their bases.

**G. CONOPSEA. Scented Palmate Orchis.** *Tegeirian peraroglaidd.* L. narrow-lanceolate. Spike oblong, dense. Fl. rose-colour, fragrant. Spur long and slender. Herb. June. Rather frequent. St. Fagan's, Llanishen, Pencoed, Bridgend, &c.

**G. ALBIDA. Scented Butterfly Orchis.** L. oblong. Spike cylindrical, dense. Spur about half the length of ovary. Fl. white, sweet-scented. Herb. June. Hills. Very rare. Near Cwm Frwd.

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**ORCHIS.** Lower lip trifid. Middle segment truncate, notched or cleft. Cells of anther with a beak between their bases. Plants spurred.

**O. MASCUA. Early Purple Orchis.** *Hosanau yr gog, Caill y ci, Ceilliau'r ci, Tegeirian coch yr gwanwyn.* L. oval or lanceolate, sometimes spotted. Spike lax. Bracts one nerved. Spur thick, blunt, equalling the ovary in length. Fl. various shades of purple. Herb. May. Frequent. Penylan, Coedgoras, Cogan, Penarth, Lavernock, &c.

A PURE WHITE variety is found at Lavernock.

**O. MACULATA. Spotted Palmate Orchis.** *Tegeirian manog byseddog.* Whole plant usually spotted. Stem solid. Lower lip, of cor. flat, generally deeply 3-lobed, lobes broad. Spur rather more than half the length of ovary. Fl. pale purple or whitish. Herb. June. Woods and pastures. Common, in district.

**O. LATIFOLIA. Marsh Orchis.** *Teigeirian y gors.* Stem hollow. L. lip, slightly 3-lobed, lateral lobes broad, reflexed. Lower bracts longer than flower. Fl. purple. Herb. June. Marshy ground. Common. Llanishen, Leckwith Common, Penylan, Cadoxton &c.

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**SPIRANTHES.** Fl. spurless. Leafy fl. sessile. Sepals converging. Spike twisted.

**S. AUTUMNALIS. Fragrant Lady's Tresses.** *Teircaill, Caineirian nydd-droedig.* Root L. ovate or oblong. Spike 1-rowed. Lower lip of cor. obcordate. Fl. white, sweet-scented. Herb. September. Frequent. In pastures. North Road, Llanishen, Sully, Barry, Pencoed, &c.

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**NEOTTIA.** Stem leafless, with brown sheathing scales. Lower lip 2-lobed.

**N. NIDUS-AVIS. Bird's Nest Orchis.** Root of many-clustered cylindrical branches or fibres. Spike oval, or cylindrical, dense. Fl. brownish yellow. Herb. June. Woods. Rare. St. Fagans, Wenvoe, near Castell Coch, Coytrahen.

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**EPIPACTIS.** Fl. spurless, stalked. Stalk twisted. Ovary straight. Stem leafy.

**E. LATIFOLIA. Broad-leaved Helleborine.** *Caldrist llydandail.* Lower L. roundish-ov., very decurrent. Upper L. lanceolate. Sep. and pet. broadly-ovate, terminal division of lower lip of cor. roundish. Fl. purplish green. Herb. July. Woods, &c. Frequent. Cogan, Swanbridge, Llanishen, Cowbridge, Pencoed, &c.

**E. PALUSTRIS. Marsh Helleborine.** *Caldrist y gors.* All L. lanceolate. Fl. large, drooping, in a lax spike, whitish, tinged with crimson. Bracts shorter than fl. Herb. July. Bogs. Rare. Culver House, Llanishen, near Bridgend.

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**LISTERA.** L. two on the stem opposite. Lip pendant, with 2 linear lobes.

**L. OVATA.** Twayblade. *Caineirian Gefell-lys*. L. ovate, opposite. Lower lip 2-lobed. Fl. green: Herb. June. Woods. Frequent. Penylan, Penarth, Cogan, Swanbridge, Barry, &c.

**OPHRYS.** Lip pendant, rich brown. Spike few flowered.

**O. APIFERA.** Bee Orchis. Lower lip dilated, as broad as long, velvety brown, 3-lobed, middle lobe notched, with a central subulate reflexed appendage. Sep. ovate, spreading, pink. Herb. June. Pastures. On the coast. Frequent. Steep Holme, near Ball Cottage, Sully, Barry, &c.

**O. MUSCIFERA.** Fly Orchis. *Caineirian yr ednogyn*. Lower lip oblong, with 2 lateral lobes, and a longer bifid middle one. Sep. oblong. Pet. narrow, linear. Fl. dark brown purple. Herb. June. [Said to have been found near St. Nicholas, by Archdeacon Bruce, in 1883, but no specimens seen.]

## 77.—IRIDACEÆ.

**IRIS.** L. sword-shaped. Outer pet. 3 large, reflexed, inner 3 smaller, erect. Stigmas 3 petaloid, arching over the stamens.

**I. PSEUD-ACORUS.** Yellow Flag. *Gellhesgen, Cammied y dwr*. Stem round, many-flowered. Inner petals smaller than stigma. Fl. yellow, Herb. June. Watery places. Common. Penylan Moors, Pengam, Penarth, Llandaff, &c.

**I. FETIDISSIMA.** Stinking Gladwin. *Hyll-gryg, Llys'r hychgryg, Gloria, Hylithr*. Stem compressed, 1-angled, many-flowered. Inner petal equal to stigma, Fl. dull purple, fetid. Herb. June. Woods. Frequent. Near the coast. Penarth, Sully to Southerndown.

## 78.—AMARYLLIDACEÆ.

**NARCISSUS.** Perianth deeply 6-cleft, spreading, with a bell-shaped crown in the throat.

**N. POETICUS.** Poet's Narcissus. Scape 1-flowered. Crown short, edged with crimson. Fl. white. Herb. May. Very rare. Llanishen reservoir. Probably planted.

**N. BIFLORUS.** Pale Narcissus. *Gylfinog deuflodeuog*. Crown short, yellow, edged with white. Scape 2-flowered. Herb. April. Rare. Bank of Ely River. Apparently quite wild.

**N. PSEUDO-NARCISSUS.** Daffodil. *Gylfinog cyffredin, Creoso gwanwyn, Cenhinen Pedr*. Scape 1-flowered. Pet. yellow. Crown yellow, waved at edge, as long as pet. Herb. April. Frequent. Llanishen, Coedriglan, &c.

**N. INCOMPARABILIS.** Short-crowned Narcissus. Like last species, but crown only half as long as petal. Fl. yellow. Herb. Damp meadows, near Pencoed and Coed Mwstwr.

**GALANTHUS.** Perianth in 2 rows. Segments of outer row large, white, inner row shorter, notched, with greenish streaks.

**G. NIVALIS.** Snowdrop. *Cloch baban, Eiriawl*. Scape 1-flowered, from small greenish spathe. Fl. white, drooping. Herb. February. Rare. Near Coedygoras, Nant Dulas, and Bridgend.

**LEUCOJUM.** Petals 6, equal, white.

**L. ÆSTIVUM.** Summer Snowflake. *Eiryaidd*. Spathe 2-6 flowered. Fl. white. Herb. May. Very rare. Porthkerry Woods, abundant.—[G. B. Hughes, M.A.]

79.—LILIACEÆ.

**RUSCUS.** Shrub. Usually diœcious. Flowers growing out of the centre of what appears to be an ovate stiff pointed leaf but in reality a leaf-like branch.

**R. ACULEATUS.** Butcher's Broom. *Celyn y Mair*. Stem erect, branched. Fl. white. Small prickly shrub. Rare. Sully, Leys, Coytrahen Wood. Apparently wild.

**GAGEA.** Fl. yellow, nearly umbellate, with 2 bracts.

**G. LUTEA.** Yellow Star of Bethlehem. L. linear. Petals 6 spreading. Fl. yellow. Herb. May. Specimen in Cardiff Museum, labelled "Castell Coch Woods, 3/5/43." Collectors name unknown. Not now to be found there.

**CONVALLARIA.** Raceme lax. Fl. bell-shaped.

**C. MAJALIS.** Lily of the Valley. *Alaw crewyll, Clych Enid*. L. 2, ovate-lanceolate. Fl. white, drooping, sweet scented. Herb. May. Rare. Coedriglan Woods.

**SCILLA.** Fl. blue. Petals distinct to base. Petals 6.

**S. NUTANS.** Wood Hyacinth. *Botasen y gog, Bwtais, Cenhin y brain, Cloch yr cos, Croeso haf, Glas y llwyn*. L. linear. Racemes drooping. Fl. blue, rarely pink or white, scented. Points of petals reflexed. Herb. May. Common in woods, &c., all over the district.

**S. VERNÆ.** Vernal Squill. *Serenyn y gwanwyn*. Bracts lanceolate. Fl. in an erect corymb, blue. L. linear, channelled. Herb. April. Rare. Near Llancarvan, between Nash Point and Dunraven.

**ORNITHOGALUM.** Petals 6, white, greenish outside. Spreading or erect.

**O. UMBELLATUM.** Star of Bethlehem. *Seren Fethlehem*. Fl. in an upright corymb. L. narrow-linear. Herb. May. Rare. Cooper's Fields, St. Fagan's, near Pontypridd, Lynvi Valley.

**O. PYRENICUM.** Spiked Star of Bethlehem. Fl. in a long raceme. Peduncles spreading or erect. Fl. many, small, greenish white. Filaments dilated below with a long point. Herb. June. Very rare. Porthkerry woods, near the Bulwarken.

**ASPARAGUS.** Stem leafy, branched. L. short, thread-like, clustered.

**A. OFFICINALIS.** Asparagus. *Gwillon, Merlllys, Llŷs y dyfrglwyf*. Fl. drooping, axillary, greenish. Fruit a berry. Herb. July. Very rare. Near Grangetown, Aberthaw, &c.

**ALLIUM.** Fl. in umbels, strong smelling. Sometimes bulbiferous, then in a close, globular head, with 2-3 membranous bracts at base.

**A. AMPELOPRASUM.** Great Round-headed Flowering Garlick. Wild Leek. L. linear, flat, keeled. Stam. longer than petals, 3 alternate ones trifid. Umbel globose. Fl. greenish purple. Herb. Very rare. Steep Holme. Considered by *Borrer* to be the remains of ancient cultivation, but, after careful trial, I doubt whether any cook could have ever rendered it acceptable to the human stomach. The taste is most abominable, and remains in the mouth for days after eating. Doubtless indigenous, as it is quite worthless as a vegetable, although cultivated from seed for four generations in a garden.

**A. URSINUM.** Broad-leaved Garlic or Ramsons. *Crag y geifr*. L. ovate-lanceolate. Petals spreading. White. Herb. May. Common. In woods, &c. Penarth, St. Fagans, Sully, Castell Coch, &c.

**A. VINEALE.** Crow Garlic. *Craf gwilt*, *Garlleg gwilt*. Leaves round, hollow. Heads with many bulbs and few flowers. Fl. greenish red. Herb. Very rare. Dry, sandy places. St. Hilary. Stated to have been so great a pest in the Vale of Glamorgan, at the end of the last century, that the farmers offered a reward for its extirpation, it is now all but extinct.

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**POLYGONATUM.** L. alternate. Fl. axillary, tubular 6-cleft, drooping.

**P. MULTIFLORUM.** Solomon's Seal. *Sel Selyf*. L. alternate, oval or oblong. Peduncles axillary, 1-8 flowered. Fl. greenish white. Herb. June. Rare. Near Llwyn-y-grant, Coedriglan, Llanedarn, &c.

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**NARTHECIUM.** Fl. racemose. Filaments woolly. Leaves linear, sword-shaped.

**N. OSSIFRAGUM.** Lancashire Asphodel. *Llafn y bladur*. Raceme of fl. erect, yellow and orange. Common in bogs. Llanishen, Caerphilly, St. Fagan's, Peterstone, &c.

A few plants of **COLCHICUM AUTUMNALE**, the Meadow Saffron, occur as an escape in the neighbourhood of Boverton.

## 80.—HYDROCHARIDACEÆ.

**ANACHARIS.** Diœcious. L. sessile, whorled, submersed.

**A. ALSINASTRUM.** American Water Thyme. L. oval to oblong, 3 in a whorl. Female plant only. Cor. trifid. Tube very long. Stigmas 3. Herb. In ditches, &c. Frequently. Leckwith Common, near Grangetown, Merthyr Canal, &c.

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**HYDROCHARIS.** L. floating, stalked, roundish-cordate.

**H. MORSUS-RANÆ.** Frogbit. *Alaw lleiaf*. Fl. large, white. Sep. 3. Pet 3. Water herb. July. Plentiful. In ditches, &c. E. Moors, Grangetown, Leckwith Common, &c.

## 81.—ALISMACEÆ.

**BUTOMUS.** Fl. perfect, umbellate, with 3 membranous bracts at base of umbel.

**B. UMBELLATUS.** Flowering Rush. *Brynnwen flodeuog*, *Engraff*. L. linear, radical. Fl. large, rose-coloured. Herb. Not common. Canton Common, Leckwith Common, Sully, Cadoxton, Llanishen.

**ALISMA.** Fl. in a panicle, with whorled branches. Sep. 3. Pet. 3. Carp. many, 1-seeded.

**A. PLANTAGO.** Water Plantain. *Dyfr Lyriad mwyaf*. Stem erect. L. cordate-ovate, ovate-lanceolate, or lanceolate, large. Panicle much branched, branches in whorls. Fl. very pale lilac. Herb. In ditches, &c. Common. Penylan, Moors, Grangetown, &c.

**A. RANUNCULOIDES.** Lesser Water Plantain. *Dyfr Lyriad bychan*. Erect L. lanceolate, or linear-lanceolate. Fl. in a simple umbel, whitish. Herb. August. Watery places. Rare. St. Hilary, Eglwys Brewis, St. Athan, &c.

**A. NATANS.** Said to have been found in Glamorgan, where, or by whom, I cannot learn.

**SAGITTARIA.** Monœcious. Fl. in whorls. Sep. 3. Pet. 3.

**S. SAGITTIFOLIA.** Marsh Arrowhead. *Saethlys saeth-ddeliiaidd*. L. arrow-shaped, on long stalks. Fl. large, on whorled spikes, white. Herb. August. Rare. Ponds, ditches, &c. Reens, near Cardiff, especially near Marshfield.

**TRIGLOCHIN.** Fl. many, in a spike. Carp. 3-6 united till ripe. L. linear, or grass-like.

**T. PALUSTRE.** Marsh Arrow Grass. *Saethbenig y gors*. Capsule 3-celled, linear. Fl. green. Herb. June. Common. In marshy places. All over the district.

**T. MARITIMUM.** Sea Arrow Grass. *Saethbenig y morfa*. L. linear, grass-like. Capsule 6-celled, oval. Fl. green. Herb. August. Common. In salt marshes, &c. Grangetown, Barry, &c.

## 82.—NAIADACEÆ.

**ZOSTERA.** Submarine plant, with long grass-like flat L. Fl. in a sheath at base of leaf.

**Z. MARINA.** Grass Wrack. *Gwelt y gamlas*, *Ynoden las-werdd y mor*. L. 3-7 nerved. Achenes furrowed. Herb. August. Shore. Frequent. Penarth, Sully Island, Barry, &c.

**ZAMICHELLIA.** Monœcious. Stam. 1 on a long filament. Ovaries usually 4 each, with one pistil. L. linear, opposite.

**Z. PALUSTRIS.** Horned Pondweed. *Llynwlyddyn corniog*. Flowers in axils of leaf. Carpel with a small beak or horn from edge. Herb. Ditches, &c. Very common. Near Cardiff, Grangetown, &c.

**POTOMOGETON.** Flowers in a spike. Petals 4. Stamens 4. Pist. 4. Achenes 4.



**P. NATANS.** Floating Pondweed. *Tafod y ci. Dyfr-llys llydanddail.* Floating L., rather thick and tough. Ovate oblong, stalked with free stipule. Achenes large, keeled at back. Herb. July. Common in ditches. Leckwith Common, Grangtown Moors, &c.

**P. OBLONGUS.** Oblong-leaved Pondweed. L. slightly narrower than last. Achenes small, not keeled. Herb. July. Common with last species.

**P. PLANTAGINEUS.** Plantain-leaved Pondweed. Leaves varying from nearly circular to oval, very thin, translucent, network very plain. Achenes small keeled on back. Herb. July. Not common. East Moors, near Pengarn, &c.

**P. HETEROPHYLLUS.** Various-leaved Pondweed. *Dyfr-llys amryddail.* Floating L. oval, stalked, Lower L. lanceolate. Sessile minutely toothed. Stipules ovate-lanceolate 2-ribbed. Peduncle thickened upwards. Herb. July. Frequent. Reens, near Penngaw, Grangtown, &c.

**P. RUFESCENS.** Reddish Pondweed. Floating L. oblong or obovate, petioles shorter than L. Lower L. lanceolate and entire, reddish green. Herb. July. Frequent. Reens, near Cardiff, Cadoxton Moors, &c.

**P. CRISPUS.** Curled-leaved Pondweed. *Dyfr-llys crych.* L. all submersed, alternate, narrow, oblong, wavy, minutely serrate. Achenes beaked. Ditches, ponds, &c. Herb. July. Frequent. St.-y-Nyll Pond, &c.

**P. PERFOLIATUS.** Perfoliate Pondweed. *Dyfr-llys trydwl.* L. cordate, or cordate-ovate, alternate, clasping, not perfoliate, all submersed. Herb. July. Not common. Near Hensol Lake, St. Fagans.

**P. PRÆLONGUS.** Long-stalked Pondweed. L. lanceolate, or linear-oblong, alternate, all submersed, margin entire. Stipules free. Herb. July. Ely River, near St. George's, &c.

**P. GRAMINEAS.** Grass-leaved Pondweed. L. linear, obtuse, 3-nerved, all submersed, with free stipules. Peduncle very short. Herb. July. Common. E. Moors, Grangtown, &c.

**P. FLABELLATUS.** Fan-leaved Pondweed. L. linear, faintly, 3-5 nerved. Achenes keeled. Spikes interrupted. Stipules adnate. Herb. July. In enormous quantities in the ponds near Upper Grangtown.

**P. PUSILLUS.** Lesser Pondweed. *Dyfr-llys eiddil.* L. narrow, linear, pointed, 3-nerved. Spikes globose. Stipules free. Herb. June. Common in ditches.

**P. DENSUS.** Opposite-leaved Pondweed. L. opposite, ovate to lanceolate, crowded, sessile. Stipules O. Spike recurved in fr. Herb. July. Ditches, &c. Common. In district.

### 83.—ARACEÆ.

**ARUM.** Spadix club-like, naked above the whorled fl., enclosed in a large spathe. L. ovate-hastate.

**A. MACULATUM.** Cuckoo Pint, Wake Robin. *Cala'r gethlydd, Cala'r mynych, Pidyn y gog.* L. ov.-sagittate, or slightly hastate, green or spotted. Fruit a cluster of red berries. Herb. April. Common. In hedge bottoms, &c. Almost everywhere in district.

84.—TYPHACEÆ.

**SPARGANIUM.** Fl. in globular heads. Fruit without down.

**S. SIMPLEX.** Lesser Burreed. *Cleddyflys undwaf syth.* L. sword-shaped. Stem erect, simple, or if any branches, each only bearing 1 head. Herb. July. Ditches, &c. Common. Leckwith, Llandaff, Cadoxton, &c.

**S. RAMOSUM.** Branched Burreed. *Cleddyflys cangenawg.* Stem erect, branched. Branches with several heads. Herb. July. Common. In ditches and ponds. Everywhere.

**S. MINIMUM.** Lesser Burreed. *Cleddyflys undwaf nofiadwy.* Stem long, floating. Head of male flowers single. Achenes sessile. Herb. July. Ponds. Merthyr Canal, Hensol Lakes, &c.

**TYPHA.** Fl. in long cylindrical velvety-like spikes, with much down.

**T. LATIFOLIA.** Reedmace, Bullrush. *Cynffon y gath, Calfeled, Hesgen felfedog fwyaf.* Male and female fl. forming a continuous spike. August. Frequent in pools, &c. Grangetown, Pengam, Flemingston Moors, &c.

85.—LEMNACEÆ.

**LEMNA.** Stamens 1-2, from a cleft in the frond. Plants seldom flowering.

**L. POLYRHIZA.** Greater Duckweed. Frond or leaf roundish, oval, flat, purple beneath, rootlets several from each leaf. Floating herb. Never observed to fl. in this district. Common in all the reens on the Moors, &c.

**L. GIBBA.** Gibbous Duckweed. L. oval, thickened below, with very large cells, one root from each leaf. Floating herb. Stagnant water. Common. Near Cardiff, &c..

**L. MINOR.** Common Duckweed. *Llinhad a dwr, Bwyd hwyaid.* Frond or leaf oval, thin, cells nearly uniform. Fl. from a slit in the margin of the leaf, 2 stamens and 1 pistil enclosed in a membranous scale, flowering frequently. July. Everywhere. In pools, &c., in the district.

**L. TRISULCA.** Ivy-leaved Duckweed. L. ovate-lanceolate, thin, with 1 rootlet, serrate at one end, usually many adherent by a small prolongation of each frond. Stagnant water. Very common about Cardiff. Never flowering.

**L. ARHIZA.** Rootless Duckweed. Like *L. minor*, but much smaller, and more irregular in form of leaf, rootlet none. Rare. In a pool near Roath Dock.

86.—JUNCACEÆ.

**JUNCUS.** Capsule 3-celled, many-seeded. L. rushlike.

**J. ACUTUS.** Great Sharp Sea Rush. *Barfrynyn*. L. o, or only a few sheathing scales at base. Stems many, barren. Fl. in a dense terminal panicle. Seeds with a beak at each end. Ripe capsule oval, as long as calyx. End of stem thorny. Herb. July. Very rare. Near Ogmore Castle.

**J. MARITIMUS.** Lesser Sharp Sea Rush. *Morfrynwen*. Ripe capsule oval, as long as cal. August. Rare. Near Lower Grangetown.

**J. CONGLOMERATUS.** Common Rush. *Brynwen bellenaidd*. Stem naked, or with a few sheathing scales at base, soft. Panicle in a very close, compact head. Capsule obovate, apiculated. Stam. 3. July. Damp fields. Very common. Everywhere.

**J. EFFUSUS.** Soft Rush. *Pabwyren, Cânwyllfrwynen*. Stem softer than last species. Panicle lax. Fl. stalked. Capsule obovate, obtuse. Stam. 3 or 6. Herb. July. Damp fields. Common.

**J. GLAUCUS.** Hard Rush. *Brynwen galed*. Stem harder than last, stiff striated. Panicle not far from top of stem. July. Frequent. Llynvi Valley, &c. Not common near Cardiff.

**J. ULIGINOSUS.** Little Bogrush. *Corfrwynen ledglymmog*. Stem leafy. Fl. in lateral and terminal heads, about 3-flowered. Scarcely panicked. July. Common.

**J. SQUARROSUS.** Heath Corn. *Brwynen troellgoryn*. Stem leafless, L. all radical. Setaceous, rigid. Fl. in a small, close panicle. July. Common. On high moors everywhere.

**J. ACUTIFLORUS.** Sharp-flowered Rush. *Brwynen glymmog a blodau blainfaen*. Stem leafy. Fl. in numerous heads, in a terminal branched panicle. Sep. all acuminate, 3 inner longest. July. Common. East Moors, Pengam, Grangetown, &c.

**J. LAMPROCARPUS.** Shining Fruited Rush. *Brwynen glymmog glaer-gib*. Stem leafy. Fl. in numerous heads, arranged in a terminal branched panicle. Sep. all equal, 3 inner obtuse, 3 outer acute. July. Common in marshy places, &c.

**J. BUFONIUS.** Toad Rush. *Brwynen y llyffant*. Stem leafy. Fl. single, not in heads. Panicle forked. Fl. distinct, somewhat spiked. L. awl-shaped. Capsule shorter than sep. July. Common. In wet places. Everywhere.

**LUZULA.** Capsule 1-celled, 3-seeded. L. flat, grass-like.

**L. PILOSA.** Broad-leaved Hairy Woodrush. *Brwynen flewog*. Fl. mostly solitary, stalked, panicked. Pedicels reflexed in fr. Ripe capsule obtuse, longer than sepal. May. Frequent. In woods. Coed Mawr, St. Fagan's, Coedriglan, Coed Mwstwr, &c.

**L. FOSTERI.** Narrow-leaved Hairy Woodrush. Like the last, but the leaves narrower, and the pedicels of fruit all erect. Ripe capsule equalling sep. May. Not uncommon. In the same situations as last species.

**L. SYLVATICA.** Great Hairy Woodrush. *Brwynen y goedwig*. L. linear-lanceolate. Fl. sessile, clustered in heads in a very branched panicle, no appendage to seed. May. Woods. Common. Penarth, Swanbridge, St. Fagan's, Wenvoe, &c.

**L. CAMPESTRIS.** Field Woodrush. *Brwynen flewog y maes*. Fl. sessile, in eads. Heads 3-4, nearly all sessile. Seeds globose. April. Fields, &c. Everywhere common.

**L. MULTIFLORA.** **Bog Woodrush.** Like the last, but larger, heads sometimes stalked. Seeds oblong. Bogs, &c., in the Hill district. Frequent. Rhondda, Cynon, and Dare Valleys, Caerphilly and Glynccorwg.

ENDOGENS—GLUMACEÆ.

87.—CYPERACEÆ.

**CAREX.** Fl. monœcious, except first species. Ovary enclosed in a flask-shaped husk.

*Spikes solitary, simple.*

**C. DIOICA.** Dioecious Carex. *Hesgen ysgar.* Male spike linear. Female spike oval. Fr. ovate, erect, or spreading. May. Rare. Near Penprisc.

**C. PULICARIS.** Flea Carex. *Chwain Hesgen.* Spike simple. Fl. of upper part male, of the lower female. Fruit polished, tapering at both ends, deflected. Stigmas 2. June. Common in Bogs. Llanishen, Caerphilly, &c.

*Spikes more than one, each composed of both male and female fl.*

**C. STELLULATA.** Little Prickly Carex. *Hesgen seraid.* Spikelet 3 or 4 roundish, rather distant. Male fl. inferior. Fr. spreading, egg-shaped, with flat beak, rough at edges. Stem 6-8 in. high, triangular with rough edges. May. Watery places. Frequent. Llanishen, Caerphilly, Pengam Moors, &c.

**C. CURTA.** White Carex. *Hesgen venwen.* Spikelets about 6, oval, somewhat distant. Fr. broadly egg-shaped, tumid, smooth. Bracts membranous. Stem about 12 in. high, spikelets triangular, silvery. Rare in damp places on Hirwain Common.

**C. OVALIS.** Oval Spiked Carex. *Hesgen hirgylchaid.* Spikelets about 6, oval, close together. Male fl. inferior. Fr. lanceolate, rough-edged, striated, as long as the lanceolate scales. Stem 12-18 in. high, with rough edges. Spikelets greyish, each with a large ovate bract; lowest with a bristle shaped bract at base. June. Meadows. Frequent. Cadoxton Moors, &c.

**C. ARENARIA.** Sea Carex. *Hesgen arfor, Hesgen y twyod.* Spikelets numerous, crowded into an oblong spike, upper ones barren, lower fertile. Upper bracts membranous; lower leafy. Stem triangular. Leaves flat. Common along the coast. Penarth, Sully, Barry, &c.

**C. MURICATA.** Great Prickly Carex. Spike oblong, dense, compound, spikelets with fertile fl. inferior. Fr. spreading, egg-shaped, acutely angular, with a long rough-edged cleft beak. Stem about 18 in. high. May. Frequent. Marshy Reens, on East Moors.

**C. VULPINA.** Great Spiked Sedge. *Hesgen dywysenog fwyaf.* Spike dense, oblong, obtuse, thrice compound. Fr. spreading, with a rough edged notched beak. Stem 24-30 in. high, sharply triquetrous. Spikelets egg-shaped, with the barren fl. uppermost. May. Riversides. Near Coedygoras, &c.

**S. MARITIMUS.** Salt Marsh Club Rush. *Clwþ frwynen y morfa*. Stem triangular. Spikes many, large, oblong, chiefly sessile, clustered, in 1-3 terminal heads with leafy bracts. Glumes bifid, with a point between. July. Salt Marshes. Very abundant. Near Cardiff.

**S. SYLVATICUS.** Wood Club Rush. *Clwþ frwynen y goedwig*. Stem triangular. Spikelets small. Ovate stalked or sessile, in clusters, on branches of a very compound panicle. Glumes entire. July. Not common. Llandaff, Melingriffith, Lisvane, &c.

**S. LACUSTRIS.** Lake Club Rush, Bulrush. *Tost frwynen*. Stem round, 20-80 in. high. Spikes in a compound cluster, usually lateral. Stigmas usually 3. Glumes smooth, notched. June. Rivers and ponds. Rumney and Ely Rivers, St.-y-Nyll pond.

**S. TABERNÆMONTANI.** Glaucous Club Rush. Like the last species, but much smaller. Stigmas 2. Glume rough, notched. June. Brackish waters. Not common. Ely river, near Cogan Pill, near Cadoxton Mill.

**S. CÆSPITOSUS.** Scaly Club Rush. *Clwþ frwynen y fawnog*. Stem round, 4-9 in. high, densely tufted, slender, striate. Sheaths at the base with subulate leaf. Spikelets small, 2 outer glumes as long as the spike. Bristles longer than achene. June. On every heathy moor in the district.

**S. PAUCIFLORUS.** Chocolate-headed Club Rush. *Clwþ frwynen goch ddu*. Much like the last species, but smaller and without the subulate leaf to the sheaths. Outer glumes shorter than the spike. Bristles shorter than achene. June. With the last, but not so abundant.

**ISOLEPIS.** Spikelet solitary, terminal, or 1-3 lateral; or in close, globular heads.  
L. linear, subulate.

**I. HOLOSCHÆNUS.** Round-headed Mud Rush. Spikes many, crowded in globose heads. Stem round. Leaves subulate. Very rare. 17th August, 1879. East Moors.

**I. SETACEOUS.** Bristle-stalked Mud Rush. *Clwþ frwynen fechan*. Stem simple. Spikes 1-3, apparently lateral. Stam. 2. Stigmas 3. Fr. obovate, ribbed, bluntly 3-angled. July. Wet places. Frequent. Penylan, Wedal, St.-y-Nyll, &c.

**I. FLUITANS.** Floating Isolepis. Stem branched, compressed, floating, jointed. L. linear, sheathing at base. Spikelet terminal oval, with few flowers. Stigmas 2. Glume obtuse, keeled. July. Rare. St.-y-Nyll, Llyn Vach.

## 88.—GRAMINEÆ.\*

**LEPTURUS.** Spikelet 1-flowered, let into notches on alternate sides of the rachis, so as to form a cylindrical simple spike. Glume one only.

**L. INCURVATUS.** Sea Hard Grass. *Corwelltyn camaidd, Corwellt y morfa*. Spikes curved. Fl. close pressed, hardly distinguishable from the stem, opening slightly when in full flower. July. Sea shores and stony places. Cardiff, Penarth, Sully, Barry, &c.

**L. FILIFORMIS.** Slender Hard Grass. Differs from the last species in the spike being straight and much more slender. Frequent on the ballast.

\* In the grasses the glumes are the bracts which enclose the spikelets; the glumellas are the bracts which enclose the individual florets; one or both may be absent.

*Spikelets with 1 perfect fl. (sometimes 1 perfect and 1 barren fl.), in 2 rows on one side of the rachis.*

**NARDUS.** Spike simple. Glume 0. Glumellas 2. Style 1.

**N. STRICTA.** *Mat Grass. Cawen ddu, Cas gan bladurwr.* Stem wiry, erect. Spike slender. June. Heaths, &c. Very common. Llanishen, Caerphilly, Garth, &c.

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**CYNODON.** Spikes digitate, laterally compressed. Glumes nearly equal.

**C. DACTYLON.** *Dog's Tooth Grass.* Spikes 3-5, digitate, runners very long. Root creeping. July. Frequent about Bute Docks and E. Moors.

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**DIGITARIA.** Spikes digitate, dorsally compressed. Glumes very unequal, with one barren and one fertile fl.

**D. SANGUINALIS.** *Bloody Finger Grass.* L. hairy. Fl. purplish. Stem ascending. July. Rarely found about Bute Docks, and ballast bank.

**D. HUMIFUSA.** *Creeping Finger Grass.* L. smooth. Fl. downy. Stem prostrate. Not rooting. July. Frequent. About Cardiff and Penarth Docks.

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**PANICUM.** Spikes 2 or more, irregularly branched. Glume with 1 perfect and 1 barren floret, awned.

**P. CRUS-GALLI.** *Loose Panick Grass.* Spikelets ovate, awned, crowded. Rachis rough. July. Common. On the ballast at Cardiff and Penarth.

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*Spikelets 1-flowered. Fl. in a dense spike. Compound spike, or spike-like panicle.*

**ANTHOXANTHUM.** Stam. 2. Outer glume awnless. Inner glume awned.

**A. ODORATUM.** *Sweet-scented Vernal Grass. Melynwellt perarogl y gwanwyn.* Glumes about as long as awns. Acquires a sweet scent on being dried. May. Fields. Everywhere in district.

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**SETARIA.** Stam. 3. Fl. with an involucre of bristles. Glumes not awned.

**S. VERTICILLATA.** *Whorled Bristle Grass.* Spike lobed, interrupted, whorled below. Bristles of fl. many, with teeth pointing downwards. Occasionally on the ballast, Cardiff and Penarth Docks.

**S. VIRIDIS.** *Green Bristle Grass.* Spike continuous, cylindrical. Bristles of fl. 2-3 with teeth pointing upwards. July. Common. About Bute Docks and Penarth Docks.

**S. GLAUCA.** *Glaucous Bristle Grass.* Spike continuous. Bristles of fl. many, with teeth pointing upwards. August. Frequent. About Cardiff and Penarth Docks.

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**AMMOPHILA.** Glume longer than floret. Fl. with a tuft of hair at base.

**A. ARENARIA.** Marram. *Morhesg, Merydd, Cors-wellt y tywod.* Panicle lanceolate or linear. L. stiff, involute, pungent. Whole plant whitish. August. Sandy shores, Sully, Whitmore Bay, Porthkerry, &c.

**PHALARIS.** Spikelets laterally compressed. Fl. without hairs. Glumes equal, strongly keeled.

**P. CANARIENSIS.** Canary Grass. *Peifr-wellt amathawl.* Spike, ovate, dense, tiled. Glume winged on keel, with white and green stripes. August. Frequent. In waste places, Penarth Road, Canton, Llandaff, &c.

**P. PARADOXA.** Raceme spike-like. Ovate cylindrical. July. Occasionally on the ballast. Cardiff and Penarth.

**P. ARUNDINACEÆ.** Ribbon Grass. *Cors-wellt amryliw.* Panicle, spreading, or close. Glume not winged. June. Riversides. Common. Taff, Ely, Rumney Rivers, Canton and Leckwith Commons, &c.

**PHLEUM.** Glume, with a short terminal awn. Glumella not awned.

**P. PRATENSE.** Cat's Tail Grass, Timothy. *Rhon-wellt y gath.* Spike cylindrical. Long glume truncate. Ciliate on keel. Awn half as long as glume. June. Common. Fields. Everywhere.

**P. BOEHMERI.** Purple Cat's Tail. Stem purple. Spike cylindrical. Glume linear-lanceolate. Acute outer, scarcely ciliate. June. Common. On the ballast only.

**P. ARENARIUM.** Sea Cat's Tail. Spike ovate-cylindrical, obtuse. Glumes lanceolate acute, ciliate on keel. June. Rare. About Cardiff Docks and East Moors.

**GASTRIDIMUM.** Glumes longer than floret, awnless, with a swollen and polished enlargement at base. Glumella awned.

**G. LENDIGERUM.** Nit Grass. Glume twice as long as glumella. Awn of glumella longer than floret, often absent. July. On the ballast at Cardiff, and Penarth. Frequent.

**ALOPECURUS.** Glumes united at base, not polished or awned. Glumellas awned.

**A. GENICULATUS.** Jointed Fox Tail Grass. *Rhon-wellt y cadnaw y cymmalog.* Stem decumbent at base, kneed. Awn about twice as long as glumella. Anthers linear, purplish, brownish when old. Watery places. Very common. Everywhere.

**A. FULVUS.** Orange Spiked Fox Tail. Awn not so long as glumella. Anthers short, thick, orange-colour. July. Frequent. In ditches, &c. Grange-town, Leckwith, &c.

**A. BULBOSUS.** Stem decumbent, bulbous at base. Awn twice as long as glumella. June. Rare. Upper Grange, and near Rompney.—[Noticed by Lightfoot, about 1780. About 1880, it covered a space of several acres of the salt marsh at Upper Grange, but is now being rapidly covered by buildings.]

**A. PRATENSIS.** Common Fox Tail Grass. *Rhon-wellt y cadnaw y weirglawdd.* Spike oblong, cylindrical, obtuse. Awn twice as long as glumella, projecting beyond glume. June. Common. In fields. Everywhere.

**A. AGRESTIS. Slender Fox Tail Grass.** Spike very long, cylindrical, tapering. Awn about twice as long as glumella. June. Frequent. On ballast banks near Penarth.

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**POLYPOGON.** Panicle cylindrical, or somewhat lobed. Glume notched, with a long soft awn. Glumellas awned.

**P. LITTORALIS. Perennial Beard Grass.** Panicle lobed, purplish. Awn as long as glume. Glume acute, almost glabrous. July. Rare. Salt marshes near Cardiff and Penarth Ferry.

**P. MONSPELIENSIS. Annual Beard Grass.** Panicle lobed, silky. Awn 2-3 times as long as glume. Glume obtuse, hairy. July. Very frequent about Cardiff Docks and ballast banks.

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**LAGURUS.** Spike ovate. Glumes and glumellas both awned. Awns soft. Glumes not notched, tapering into long fringed points.

**L. OVATUS. Hare's Tail Grass.** Spike soft, woolly. L. broad, downy. July. Rarely on ballast. Penarth Ferry and Grangetown.

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**HORDEUM.** Florets in threes, 1 perfect, the others barren. Glume and glumella both awned. Awns stiff, rough.

**H. MARITIMUM. Sea Barley Grass. *Haidd-wellt y mor.*** Lateral florets barren, centre one perfect, all with barbed awns, outer glume of lateral floret subulate, inner semi-ovate. Awns stiff, spreading. August. All along the sea coast. Common.

**H. MURINUM. Wall Barley Grass. *Haidd-wellt y muriau.*** Lateral florets barren, centre one perfect, all with barbed awns. Glume of middle fl. lanceolate, ciliate; of lateral fl. bristlelike, rough. July. Common about Cardiff, &c.

**H. PRATENSE. Field Barley Grass.** Lateral fl. barren, centre one perfect, all with barbed awns. Glumes all bristle-like, rough, not ciliate. June. Meadows. Frequent in district. Penylan, New Cemetery, Llanishen, Llandaff.

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*Spikelets 1-flowered. Panicle lax, usually spreading.*

**MILIUM.** Spikelet 1-flowered, green, with both glumes and glumellas. Glumes nearly equal, about equalling the floret.

**M. EFFUSUM. Millet Grass. *Miled-wellt.*** Panicle lax, much branched. Glumellas acute, green, glabrous. L. broad, flat. June. Woods. Llandaff, Ball Cottage, Dynas Powis, &c.

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**MELICA.** Florets with both glume and glumella. Awns none. Glumes nearly equal, and nearly equalling the spikelet in length, purplish.

**M. UNIFLORA. Melic Grass. *Melic-wellt y goedwig.*** Panicle lax, branched. Spikelet erect, with one perfect fl. and a rudimentary one. May. Woods. Common. Penylan, New Cemetery, Llanishen, &c.

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**APERA.** Awn of glumella 2-4 times as long as spikelet. Glume not awned.

**A. SPICA VENTI. Silky Bent Grass.** Panicle lax, spreading. Awn very long. Anthers linear, long. August. Very common. On the ballast about Shrimphouse, Grangetown, Penarth Ferry, &c.



**A. INTERRUPTA.** Panicle close, interrupted. Lower branches distant. Awns very long. Anther oval. August. Much rarer than the last species. In the same localities.

**AGROSTIS.** Glume not awned. Awn of glumella less than twice as long as glumella; sometimes not awned.

**A. CANINA. Brown Bent Grass.** *Meus-wellt y ci.* Branches of panicle long and spreading when in fl. Awn twisted, slightly exceeding the glumella, Sheaths smooth. June. Heaths, &c. Common, Llanishen, Wedal, Caerphilly, &c.

**A. SETACEA. Short-leaved Bent Grass.** Branches of panicle short. Awn bent and twisted from base of glumella, about twice as long. Sheaths rough. August. Very rare. Waun, near Pencoed, and St. Mary Hill Down.

**A. VULGARIS. Common Bent Grass.** *Meus-wellt addfain.* Branches of panicle smooth. Ligule abrupt, short. Glumella not awned. June. Dry wall-tops, &c. Common over whole district.

**A. ALBA. Marsh Bent Grass.** *Meus-wellt gwyn y waun.* Branches of panicle rough. Ligule long. Acute. Glumella not awned. Common in district.

*Spikelet 2 or more flowered, sessile or nearly so. In a spike or spike-like panicle.*

**TRITICUM.** Spikelets set sideways to the rachis, in alternate notches, 1 in each notch.

**T. CANINUM. Fibrous-rooted Wheat Grass.** *Gwenith-wellt sypwraidd collog.* Spikelet 4-5 flowered. Leaves flat, rough. Awn longer than its floret. June. Frequent. Cooper's Fields, Llandaff, near Cog, Kymin, &c.

**T. REPENS. Couch Grass.** *Gwenith-wellt ymdanawl.* Spikelet 4-8 flowered. Glume and glumella acute. Glumella with a short awn, sometimes awnless. L. flat and green, or involute, and glaucous, not hard pointed. June. Fields. Very common. All over the district.

**T. JUNCHEUM. Rushy Sea Wheat Grass.** *Gwenith-wellt brwynnaidd y morlan.* L. involute, downy above, with a hard indurated point. Spikelet 4-6 flowered. Glume and glumella obtuse, awnless. Rachis brittle at the notches. July. Sandy shore. Common. Penarth to Southerndown.

**LOLIUM.** Spikelets set with back to the rachis, in alternate notches. 1 in each notch. Glumes 2.

**L. PERENNE. Common Rye Grass.** *Efryn parhaus.* Spikelet 6-8 flowered, longer than glume. Awn short or none. July. Fields. Common. All over the district.

**L. MULTIFLORUM. Italian Rye Grass.** Spikelet 9-14 flowered, longer than glume. Outer glumella with a long awn. July. Common. In fields. Usually sown. Llandaff, St. Fagans, &c.

**L. TEMULENTUM. Darnel, or Tare.** *Efryn collog, yd meddw.* Spikelet about 6-flowered. Floret swelled in fruit. Glume as long, or longer than spikelet. Outer glumella sometimes awned, often not. July. Frequent, as a ballast plant. *The tare of Scripture, and the only poisonous grass, native to Britain.*

**ELYMUS.** Spikelets 2-3 in each notch, and set alternately in each side of a flattened rachis.

**E. ARENARIUS.** **Lyme Grass.** Spikes erect, stout, close. Glume downy, as long as spikelet. L. involute, thorn pointed. July. Rare. Bulwarks, Porthkerry, on the shore.

**BRACHYPODIUM.** Spikelet slightly stalked, somewhat distant, many-flowered, on both sides of rachis. Rachis not notched. Florets awned.

**B. SYLVATICUM.** **Slender False Brome Grass.** Spike usually drooping. Awns of upper florets longer than glumella. L. soft, hairy above. July. Common. Woods and hedges everywhere. Penylan, Leckwith, St. Fagans, &c.

**CYNOSURUS.** Spikelets more or less one-sided, each with a comb-like bract at the base.

**C. CRISTATUS.** **Crested Dog's Tail Grass.** *Rhon-wellt y ci cribog.* Spike linear. Glumellas with very short awns. Bracts comb-like, awnless. July. Common in every field.

**C. ECHINATUS.** **Crested Dog's Tail Grass.** Spikes ovate, slightly compound. Florets with long awns. Not uncommon. On the ballast. July.

**KÆLERIA.** Spike cylindrical, or oblong. Glumes keeled, unequal. Glumella membranous.

**K. CRISTATA.** **Crested Hair Grass.** Spike-like panicle, somewhat close, interrupted below. Outer glumella acute. L. rough and ciliate on edges. July. Common. On moorish places. Llanishen, Caerphilly, Pontypridd, &c.

*Spikelets 2 or more flowered. Inflorescence paniced or racemose, mostly spreading.*

**TRIODIA.** Spikelets few, in a lax raceme, 3-4 flowered, awnless.

**T. DECUMBENS.** **Decumbent Heath Grass.** *Gweun-wellt gorweiddiog.* Barren stem decumbent. Flowering stem erect. Spikelets oval, 3-4 flowered. Glume about as long as floret. June. Common. In dry pastures, &c. E. Moors, Penylan, Llanishen, &c.

**POA.** Spikelets oval, or linear, paniced, awnless. Glumes shorter than florets. Outer glumella not fringed on back.

**P. TRIVIALIS.** **Roughish Meadow Grass.** *Gweun-wellt lledarw.* Panicle spreading. Sheaths of stem roughish, ligule acute. Spikelet 2-3 flowered. Florets with a cottony web at base. June. Meadows. Common. Everywhere.

**P. NEMORALIS.** **Wood Meadow Grass.** *Gwaun-wellt y goedwig.* Stem very slender, ligule obtuse. Panicle very lax, spreading (sometimes close and narrow) with hair-like branches. Spikelet 2-4 flowered. Florets with a cottony web at base. June. Woods. Common. Coed Mawr, St. Fagans, Coed Mwstur, Pencoed, &c.

**P. PRATENSIS.** **Smooth Meadow Grass.** *Gweun-wellt llyfn.* Panicle spreading. Upper L. much shorter than sheath. Ligule large, obtuse. Spikelets 3-4 flowered. Florets with a cottony web at base. July. Common. In meadows. New Cemetery, Kymin, Cwrt-y-fil, Corners-well, &c.

**P. ANNUA. Annual Meadow Grass.** *Gweun-wellt blynyddawl.* Stem procumbent or ascending. Panicle erect, spreading. Spikelet 5-6 flowered. Florets not webbed at the base. Ligule acute. Common everywhere. From January to December.

**BRIZA.** Spikelet about 7-flowered, broadly triangular or heart-shaped. Outer glumella rounded on back, in a few slightly keeled, but always rounded below. Awnless.

**B. MEDIA. Quaking Grass.** *Eigryn, Gwenith ysgyfarnog.* Spikelets 6-8 flowered. Lowest floret longer than glume. Ligule obtuse, short. June. Pastures. Frequent. Penarth, Llandaff, St. Fagans, Caerphilly, Leys, Southerndown, &c.

**CATABROSA.** Spikelets mostly 2-flowered. Awnless. Glume very obtuse, much shorter than florets.

**C. AQUATICA. Water Hair Grass.** *Brigwellt dyfrdrig.* Stem decumbent at base. Often rooting at nodes. L. broad. Branches of panicle half whorled. June. Rare. Near the Vitriol Works, E. Moors, Pengam Moors, &c.

**GLYCERIA.** Spikelets 6-20 flowered. Outer glumella obtuse or very slightly pointed at end, with 5-7 strong nerves or ribs. Margin membranous.

**G. AQUATICA. Reedy Sweet Grass.** Stem erect, reed-like, tall. Ligule short, obtuse. Panicle large, spreading. Spikelet 5-10 flowered. July. Watery places. Frequent. Lower Penarth, Sully, Cadoxton, &c.

**G. FLUITANS. Floating Sweet Grass.** *Gweun-wellt nawf.* Stem decumbent, or ascending, rooting at nodes. Floating. Ligule acute. Spikelet 7-20 flowered. Watery ditches. Everywhere common.

**SCHLEROCHLOA.** Spikelet more than 2-flowered. Outer glumella obtuse, with 5 faint nerves, often keeled at tip.

**S. LOLIACEÆ. Dwarf Wheat Meadow Grass.** *Corwenith-wellt y morfin.* Panicle racemose, nearly simple, compact, close, rigid. Spikelets pointing one side, 8-12 flowered. Rachis zigzag. July. Shore at Penarth, E. Moors, near Cold Knap Point.

**S. PROCUMBENS. Procumbent Sea Meadow Grass.** Panicle branched, close, compact, oval, one-sided. Branches in two rows, rigid. Spikelet 3-4 flowered. Stem procumbent. Salt marshes. Frequent. All along the shore.

**S. RIGIDA. Hard Meadow Grass.** *Gwaen-wellt anhyblyg.* Panicle rigid. Branches spreading in 2 rows, pointing to one side. Spikelets 7-10 flowered. Whole plant wiry. June. Common. On walls, &c. Penarth, Cogan, Barry to Southerndown.

**S. MARITIMA. Creeping Sea Meadow Grass.** *Gweun-wellt arfor.* Stem creeping, and rooting at the base. L. involute. Branches of panicle stiff, erect, spreading, lower usually in pairs. June. Common. On the coast, especially near Cardiff.

**S. DISTANS. Reflexed Sweet Grass.** Stem tufted, decumbent at base, not rooting. L. flat. Branches of panicle spreading, lower branches in fours, deflexed in fr. Spikelet 3-8 flowered. Outer glumella obtuse. July. Marshes. About Cardiff Docks, &c. Common.

**MOLINIA.** Panicle purplish. Spikelets mostly more than 2-flowered. Outer glumella very acute.

**M. CÆRULEA.** **Blue Melic Grass.** *Melic-wellt rhuddlas.* Panicle long, narrow. Spikelets awnless. Heaths. Not rare. Caerphilly, Pontypridd, Hirwain, &c.

**PHRAGMITES.** Panicle large, purplish or brownish. L. broad. Spikelets 3-5 flowered. Florets awned, with long silky hairs at base.

**P. COMMUNIS.** **Common Reed.** *Corsen cyffredin.* Stem 6-7 feet high, erect. July. Common. Roach Ponds, Leckwith and Canton Commons, Rivers Taff and Ely.

**HOLCUS.** Upper florets awned, lower not. Awn very short, hardly exerted. Spikelet 2-flowered.

**H. MOLLIS.** **Creeping Soft Grass.** *Maswellt rhedegog.* Glume acute. Awn projecting beyond glume. Nodes of stem with a distinct downy tuft. Hedges and fields. Not common. Near Penarth, Corners-well, Pencoed, Eweny Bridge, &c.

**H. LANATUS.** **Downy Soft Grass.** *Maswellt sypwraidd.* Glume obtuse. Awn curved, inclosed in floret. Nodes of stem without distinct tuft of hairs. June. Meadows. Common. Everywhere.

**BROMUS.** Spikelets 3 or more flowered. Outer glumella rounded on back, bifid at end. Awn from below tip of glumella.

**B. STERILIS.** **Barren Brome Grass.** *Pawr-wellt anhiliawg.* L. downy. Panicles drooping. Spikelets linear-lanceolate, about 7-flowered. Peduncles very long. Glumella smooth. Awn much longer than glumellas. June. Hedges, &c. Common. Pencisely, Fairwater, St. Fagans, &c.

**B. MADRITENSIS.** **Upright Annual Brome Grass.** Panicle erect. Peduncles short. Spikelets about 10-flowered. Stamens mostly 2. Upper glume 3-5 veined, lower 1-veined. Glumellas nearly equal. Awns about same length as floret. July. Rare. Reported from Glamorganshire, but I have only seen it as a ballast plant.

**B. SECALINUS.** **Rye Brome Grass.** *Pawr-wellt, Ller.* Panicle lax, drooping in fr. L. hairy. Sheath smooth. Spikelets broadly lanceolate, 7-10 flowered. July. Not common. Near the old Fever Hospital, near Aubry Arms, Bonvilstone. Frequent.

**B. COMMUTATUS.** **Confused Brome Grass.** Panicle lax, branched, slightly drooping. Spikelet 10-12 flowered, loosely tiled. Ped. longer than glabrous spikelet. L. and sheaths hairy. Awn same length as floret. June. Frequent. About Cardiff, Penarth, and Barry.

**B. MOLLIS.** **Soft Brome Grass.** *Pawr-wellt maswg.* Panicle erect. Spikelets 5-10 flowered. Spikelet ovate, downy. Awn about equalling floret. Fields. Frequent. Old Sea Lock, Plasturton, Llandaff, &c.

**B. ERECTUS.** **Upright Perennial Brome Grass.** *Pawr-wellt uniawnsyth.* Stem short. L. narrow. Hairs of sheaths long, pointing upwards. Panicle erect, or nearly so. Spikelet purplish, lanceolate, or linear-lanceolate, 5-10 flowered. Awns about half as long as spikelet. Walls, and dry places, &c. July. Frequent. Cardiff, Penarth, &c.

**B. ASPER. Rough Brome Grass.** *Pawr-wellt blewog.* Stem tall. Leaves broad, rough. Hairs of sheath long, pointing downwards. Panicle drooping. Spikelets lanceolate, or linear-lanceolate. Awns about half as long as spikelet. July. Frequent. Woods and waysides. Caerau, Rough-break, Coed-riglan, Drope, &c.

**FESTUCA.** Outer glumella rounded on back, very acute, entire. Awn terminal. Spikelets 3 or more flowered.

**F. GIGANTEA. Great Fescue Grass.** *Gwrwgawn, Peisg-wellt hirian.* Fl. panicle, erect, or drooping, very lax. Spikelet 3-5 flowered. L. with very prominent ligules. Awns longer than florets. July. Woods, &c. Not common. Leckwith near Church, near Dynas Powis Castle.

**F. UNIGLUMIS. Single Glumed Fescue Grass.** *Peisg-wellt uncib.* Spikelets in 2 rows, on a one-sided spike. Lower glume wanting. Stam. 3. Awns longer than florets. July. Frequent. On the ballast banks.

**F. BROMOIDES. Barren Fescue Grass.** *Peisg-wellt anhiliawg.* Panicle erect, short, slightly spreading. Upper glume as long as lowest floret. Awns longer than floret. Stam. 1. June. Waste ground. Frequent. About outskirts of town.

**F. OVINA. Sheep's Fescue Grass.** *Peisg-wellt y defaid.* Root fibrous. Upper part of stem angular, rough. L. very narrow, involute. Panicle close. Spikelet 4-6 flowered. Awns shorter than florets. Stam. 3. June. Dry pastures. Exceedingly common. Almost everywhere.

**F. DURINSCULA. Hard Fescue Grass.** *Peisg-wellt caledaidd.* Root fibrous. Upper part of stem smooth. L. flat. Panicle spreading. Spikelet about 6-flowered. Stamens 3. Awns shorter than floret. June. Fields, &c. Common. Over all the district.

**F. RUBRA. Reddish Fescue Grass.** *Peisg-wellt ymdanawl.* Root creeping. Upper leaves flat, rarely involute. Panicle spreading. Spikelet 4-10 flowered. Awns shorter than floret. Stamens 3. June. Common. Over all the district. In dry sandy soil.

**F. ELATIOR. Tall Fescue.** *Peisg-wellt hydwl.* Panicle somewhat drooping, much branched, spreading. Branches bearing 2-15 spikelets. Upper ligule very short. Spikelets 2-6 flowered. Florets awnless. June. Rare. Damp woods, &c. Near Llanishen Waterworks.

**F. PRATENSIS. Meadow Fescue Grass.** *Peisg-wellt y gweunydd.* Panicle erect, spreading, nearly simple. Branches in pairs, one bearing 3-4 spikelets, the other only 1. Spikelets 5-10 flowered. Awnless. June. Meadows. Everywhere.

**F. LOLIACEÆ. Spiked Fescue Grass.** *Peisg-wellt tywysnaidd.* Spiked. Spikelets solitary, 10-12 flowered. Florets awnless. Rare. Near Mill Race, Llandaff, &c.

**DACTYLUS.** Outer glumella keeled and fringed on back. Glume 3 or more flowered. Awn short from above middle of glumella.

**D. GLOMERATA. Cock's Foot Grass.** *Byswellt garwaidd.* Spikelets in dense oval clusters. Branches of panicle unilateral, distant. L. flat, rough. June. Pastures, &c. Everywhere in district.

**AVENA.** Outer glumella with 2 teeth or bristles at end, and a long-kneed twisted awn from, at, or below its middle. Glume bifid. Both fl. perfect.

**A. FLAVESCENS.** **Yellow Oat Grass.** *Ceirch-welldt melynauidd.* Panicle erect, lax, much branched. Lowest L. and sheaths hairy. Ligule short, obtuse. Spikelet small, about 3-flowered. June. Dry places. Frequent. Ely, St. Fagans, Llandaff.

**A. PUBESCENS.** **Downy Oat Grass.** *Ceirch-welldt manbluauidd.* Panicle rarely simple. Lowest L. and sheaths hairy. Ligule prominent, acute. Spikelet 2-3 flowered. June. Meadows. Rare. Near Esparto Shed, Lower Grange.

**A. FATUA.** **Wild Oat.** *Fettur, Gwyllt-geirch.* Panicle lax, erect, drooping in fr., about 3-flowered. Florets with long dusky hairs at base. Ligule obtuse. Lowest L. and sheaths glabrous. August. Occasionally in corn fields, and on the ballast.

**ARRHENATHERUM.** Outer glumella with 2 points at end. Upper fl. perfect, with long straight awn. Lower fl. male only, with a long kneed and twisted awn, attached to glumella at or below its middle. Glume bifid.

**A. AVENACEUM.** **Oat-like Soft Grass.** *Maswelllt ceirchauidd.* Panicle long, lax. June. Common. In corners of fields, &c. Banks of Feeder, &c.

**AIRA.** Awn fine, twisted, never much longer than the floret.

**A. CÆSPITOSA.** **Turfy Hair Grass.** *Brigwelllt mawnog.* Stem tall. Panicle large, much branched, spreading in fr. L. long, upper surface ridged and furrowed. Ridges with teeth pointing downwards. June. Fields, &c. Frequent. Penttyrch, Capel, Llaniltarn, Garth Mountain.

**A. CARYOPHYLLÆA.** **Silver Hair Grass.** *Brigwelllt arianauidd.* Panicle spreading. L. bristle-like. Outer glumella deeply bifid, with a very long awn from below middle of glumella. June. Rare. On dry sandy places. Grangetown, Heol-y-mynydd, Southerndown.

**A. PRÆCOX.** **Early Hair Grass.** *Brigwelllt y gwanwyn.* Panicle close. Outer glumella deeply bifid. Awn from near base of glumella. April. Sandy shores, &c. Sully, Barry, &c.

**A. FLEXUOSA.** **Mountain Hair Grass.** *Brigwelllt gwyrngam mynyddawl.* Panicle spreading, with wavy branches. Outer glumella toothed at end, not bifid. Awn much longer than glumella. July. Dry mountain heaths. Very common in district.

## ACROGENS.

### 89.—EQUISITACEÆ.

**EQUISETUM.** Fructification in a terminal cone. L. none. Branches whorled.

E. TELMATEIA. **Great Horse Tail.** Fertile stems, appearing in April, before the barren stem, unbranched, brownish. Sheaths loose, crowded. Teeth 30-40. Linear setaceous. Barren stem, erect, stout, whitish. Branches very many. Not common. Wood near Leckwith Bridge, very abundantly.

E. ARVENSE. **Common Horse Tail.** *Rhawn y march yr ardir.* Fertile stems, unbranched, brownish, appearing about March, before the barren stem. Barren stem. Mostly decumbent. Green. Branches in whorls. Everywhere. Common.

E. HYEMALE. **Dutch Rush.** Stem always simple, very hard, whitish green, with 14-28 furrows. Sheaths whitish in the middle, blackish at tip and base, rarely toothed. Rare in damp woods. Near Tongwynlais and Melin-griffith.

E. PALUSTRE. **Marsh Horse Tail.** *Rhawn y march y gors.* Fertile stem branched, seldom simple. Barren stem similar. Branches simple whorled. Stem deeply furrowed. Sheaths loose, with 8 acute teeth. Fructification in June. Frequent. St.-y-Nyll, Hensol.

E. LIMOSUM. **Smooth Naked Horse Tail.** *Rhawn y march lled-diddail* Barren and fertile stems nearly smooth. Furrows 16-18. Sheaths with short, rigid, distinct teeth. Branches few or abortive, simple or imperfect, confined to upper part of stem. Spike obtuse. Watery places. Frequent. St.-y-Nyll, Hensol, Llyn Vach, &c.

E. SYLVATICUM. **Wood Horse Tail.** Barren and fertile stems erect, branched, branches, whorled, compound, drooping. Sheaths lax, 3-12 toothed, a very graceful plant. Common. In woods. Leckwith, St. Fagans, &c.

### 90.—MARSILIACEÆ.

**PILULARIA.** Rhizome creeping, giving off 2-3 bristle-like leaves at intervals. Fructification, a pill-like capsule at base of L.

P. GLOBULIFERA. **Marsh Pill Wort.** *Pelanllys gronynawg.* L. cinnate when young. Damp places. Llyn Vach, near Hirwain.

### 91.—LYCOPODACEÆ.

**LYCOPodium.** Stem branched, usually creeping. L. imbricated. Caps. 1-celled, 2-valved. Containing very minute spores (microspores), and 3-valved, with 1-4 large spores (macrospores).

**L. SELAGINOIDES. Lesser Alpine Club Moss.** *Cnwþ-fwsogl syth lleiaf.* Stem prostrate. Branches ascending simple. L. lanceolate, scattered, ciliate-serrate. Not common. Mountains near Glyn Corrwg and Carnfach.

## 82.—FILICES, OR FERNS.

*Fructification marginal or terminal.*

**OPHIOGLOSSUM.** Frond ovate or lanceolate. Fructification in a spike, springing from the frond.

**O. VULGATUM. Adder's Tongue.** *Tafod y neidr.* Frond ovate, obtuse. Spike linear, with capsules arranged back to back in two rows, opening transversely. Dampish pastures. Not common. Llandough, Llandaff, Coedriglan, and near Cowbridge.

**BOTRYCHIUM.** Fructification in a panicle, springing from the frond. Frond pinnate.

**B. LUNARIA. Moonwort.** *Loer-redynen.* Leaflets fan-shaped or reniform, crenate or toothed, fleshy. Fertile branch bearing rows of spore cases on the edge of a pinnate rachis. July. Rare. Near Coedriglan, Llantrythid, Coychurch, and Sandhills Newton Nottage.

**OSMUNDA.** Capsules in branching spikes, arranged in clusters at the extremity of the frond. Ring obscure. Fronds circinate when young.

**O. REGALIS. Royal Fern.** *Lloerlys, Lloer-Redynen cyfrdwg.* Frond bipinnate. Leaflets oblong, ovate, erect, 2-6 ft. high. July. Rare. Near Blackmill and Wain-y-Llan, and Wain-y-Gilvach, near Llangonoed.

**HYMENOPHYLLUM.** Sori or capsules in a marginal cup-shaped involucre. Frond small, delicate.

**H. TUNBRIDGENSE. Tunbridge Filmy Fern.** *Rhedynach.* Rhizome creeping, filiform branched, forming entangled masses, clinging to the surface of rocks. Fronds slender, delicate, and pellucid, 3-4 inches high. *Pinnæ flat.* Rachis winged, spinosely serrate. Inv. sessile in the axils of the pinnæ spinosely serrate. July. Rare. Rhondda Valley, near Pentre, and above Blaen Rhondda, and near Llyn Vach.

*Fructification on back of the frond.*

**CETERACH.** Scales covering the sori. Frond pinnatifid, back covered with chaffy scales.

**C. OFFICINARUM. Scaly Fern.** *Rhedyn y gogofau, Dweg-redynen feddygawl.* Fronds dark-green above, 3-6 in. high. July. Common. Near Cardiff, Llandaff, St. Fagans, Bonvilstone, St. Nicholas, &c.

**PTERIS.** Stem rather woody. Frond trifid. Branches bi-pinnate. Final segment of frond lanceolate, entire. Sori covered by enrolled margin of leaflets.



**P. AQUILINA.** **Common Brake or Bracken.** *Adain-redynen eryraidd.* Frond stiff, usually oblique on the stem. Summer. Common. Everywhere. Penylan, Leckwith, &c.

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**ALLOSORUS.** Barren frond, bi-tripinnate, herbaceous, final segments toothed. Fertile frond with the sori covered by the enrolled margin.

**A. CRISPUS.** **Mountain Parsley Fern.** *Adain Redynen y Chwarelau.* Outline of frond roundish, triangular, resembling parsley. July. Rare. Stony places. On mountain above Cynon Valley, Aberdare.

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**ADIANTIUM.** Frond pinnate or bi-pinnate. Leaflets roundish, web-shaped, lobed. Sori at ends of lobes covered by a membranous portion of the frond rolled back.

**A. CAPILLUS VENERIS.** **Common Maiden-hair Fern.** *Briger Gwener, Briger Gweno.* Stalk slender, blackish. Summer. Frequent on wet places on Lias Cliffs, on Barry Island, Porthkerry; Fontigary very abundant, and sparingly as far as Dunraven.

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**POLYPODIUM.** Sori in circular spots on back of frond, no indusium or other covering.

**P. VULGARE.** **Common Polypody.** *Llawredynen.* Frond pinnatifid. Segments oblong. Common. Dynas Powis, Llanedarn, Deri, Llanishen, &c.

**P. VULGARE var. CAMBRICUM.** With the segments pinnatifid a second time. Collected between Dynas Powis Castle and Cwm George, by John Ray, the Father of English Botany, in 1690, and his specimen is still preserved in the Museum of Natural History, South Kensington. This plant was completely rooted out as late as 1876, by a man who hawked the roots for sale at one shilling each.

**P. PHEGopteris.** **Beech Polypody.** *Llawredynen y fagwyr.* Frond pinnate. Leaflets pinnatifid. Veins downy. Lowest pair of pinnæ bent downwards. Very rare. Cwmffrwdor.

**P. DRYopteris.** **Oak Polybody** *Llawredynen y derw.* Frond with a broadly triangular outline, ternately bi-pinnate, smooth, and a delicate light green. Rare. Near St. Hilary, Cwmffrwdor.

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**POLYSTICHUM.** Sori roundish when young, covered by indusium when young. Indusium attached by centre.

**P. ANGULARE.** **Soft Prickly Shield Fern.** *March-redynen wrychog.* Frond broadly lanceolate in outline, bi-pinnate. Pinnules nearly equal in size. Leaflets acute, stalked, not rigid. Frequent in woods, &c. St. Fagans, Coed Mawr, Coed-y-Mwstwr, &c.

**P. LOBATUM.** **Hard Prickly Shield Fern.** *March-redynen glustiawg.* Outline of frond narrowly lanceolate, rigid. Pinnules nearest rachis largest in size, decurrent, few stalked. Frequent in same situations as the last species.

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**LASTRÆA.** Sori oval, covered by an indusium when young. Indusium kidney-shaped, attached by the notch.

**L. FILIX-MAS. Male Fern.** *March-redynen wryyw, Rhedyn y Cadno.* Stipes densely scaly. Fronds growing in circular tufts, bi-pinnate. Pinnæ linear-lanceolate, obtuse, toothed. Sori on upper half of frond only. Very common. Penylan, Coed-y-goras, Nant Dulas, &c.

**L. OREOPTERIS. Scented Shield Fern.** *Rhedyn Mair, March-redynen y mynydd.* Stipes short. Fronds erect, 2-3 ft. high, delicate light green, fragrant when bruised. Pinnæ linear-lanceolate, pinnatifid, becoming gradually smaller from the middle of frond to the base. Sori confined to the margin of the segments. Indusium very small. Frequent in the Hill district, Rhondda and Llynvi, Pencoed, &c.

**L. DILATATA. Broad Prickly Shield Fern.** *March-redynen eang.* Frond tri-pinnate, below segments serrate, slightly awned. Lowest pair of pinnæ shorter than those above. Stem scaly. Frequent in woods, &c., over whole district.

**L. FENISECH. Scented Prickly Shield Fern.** Frond triangular, tri-pinnate. Leaflets curled back at margins, glandular below. Near Barry and Porthkerry. Frequent.

**CYSTOPTERIS.** Sori roundish. Indusium very convex, hooded, circular, the end attached beneath the lower end of the sorus, the other end free.

**C. FRAGALIS. Brittle Bladder Fern.** *Ffiol-redynen ddentiawg.* Frond ov.-lanceolate in outline, bi-pinnate. Pinnæ oval-lanceolate. Leaflets pinnatifid. Summer. Very rare. Rhondda Valley, near Ystradfordwg.

**SCOLOPENDRIUM.** Sori linear, covered by a double indusium when young, in one row on each side of rib, diverging from it and never touching it.

**S. VULGARE. Hart's Tongue Fern.** *Tafod yr hudd.* Frond oblong-lanceolate, cordate at the base. Stalk about one-third length of frond. Very common. Over whole of the district.

**BLECHNUM.** Sori linear, parallel with midrib of leaf. Frond pinnate.

**B. BOREALE. Northern Hard Fern.** *Rhedyn Gwib.* Barren frond, leaflets oblong-linear, broadest at base, lowest cordate or reniform. Fertile frond, toothed, comb-like. Frequent. Cwm George, Michaelstone Super Ely, Lisvane, Traveller's Rest, &c.

**ASPLENIUM.** Sori linear, straight, diverging from midrib of leaf.

**A. TRICHOMANES. Maiden-hair Spleenwort.** *Dug-redynen Gwallt y forwyn.* Fronds pinnate. Pinnules, many roundish or oval, crenate. Rachis blackish. Common. North Road, St. Nicholas, St.-y-Nyll, St. Lythan's, Caerphilly, &c.

**A. ADIANTUM NIGRUM. Black Maiden-hair Spleenwort.** *Dug-redynen ddu, Dugoesog, Duwallt y forwyn.* Frond triangular in outline, bi-tripinnate. Segments toothed. Rachis slightly winged in the frond. Common. Llandaff, Leckwith, St. Nicholas, Caerphilly, Cefn On, &c.

**A. MARINUM. Sea Spleenwort.** *Dug-redynen arfor.* Frond pinnate, pinnules many, oblong, ovate, crenate one side. Somewhat auricled at base. Rare. Barry and Dunraven.

A. RUTA-MURARIA. **Wall Rue, Spleenwort.** *Dueg-redynen y muriau, Rhyw'r muriau.* Frond bi-pinnate, segments more or less wedge shaped, roundish, lobed at apex. Common on walls, &c. Leckwith Bridge, Llandaff, Tumble-down-Dick, St. Fagans, &c.

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ATHYRIUM. Sori oblong, kidney shaped, inner edge of indusium fringed. Frond bi-pinnate. Segments pinnatifid.

A. FILIX-FEMINA. **Lady Fern.** *March-redynen fenyw.* Frond with lanceolate or oval-lanceolate outline. Leaflets linear, oblong, pinnatifid. Segments toothed. Woods, &c. Common. Almost everywhere in district.

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## EXTINCTIONS.

THERE are some cases where plants have disappeared, or nearly so, from localities where they were formerly abundant, either owing to the increase of the town, or other causes, which it is thought well to place on record.

The author hopes that, should this little work stimulate Botanical studies by the youth of Cardiff, it will lead to care and discrimination in dealing with the rare plants in which this district is so rich; he also trusts that students will not only abstain themselves but will discountenance others from wantonly destroying the wildlings of the woods and fields—remembering that causes over which man has but little control will too frequently thin their numbers—so that many succeeding generations may find health and pleasure in their rambles in search of the beauties of nature.

*PEONIA CORALLINA*, was at one time abundant on the Steep Holme, but attention being specially called to the plant, during a meeting of the British Association, at Bristol, in 1860, it was carried off wholesale by excursionists, &c., until only 4 or 5 plants remained on inaccessible parts of the cliff; but strict supervision on the part of the proprietor of the island, who prohibits the removal of roots, has enabled the plant to regain nearly its former luxuriance.

*DIANTHUS CARYOPHYLLUS*, reported by Dr. Turton as abundant on the walls of Cardiff Castle in 1803. Lingered there till 1872, when, on re-pointing the wall, the last traces were destroyed.

*RHAMNUS CATHARTICUS*, reported by Dr. Turton from the Flat Holme is now extinct. The precise date when it became so, however, is uncertain.

*SAXIFRAGA TRIDACTYLITES*, once abundant about Roath Church, has disappeared there within the last two years, owing to alterations.

*ERYNGIUM CAMPESTRE*, which grew very luxuriantly at the old artillery range, near the Copper Works, was completely overwhelmed by the extension of the Roath Dock last year.

*BUPLEURUM ROTUNDIFOLIUM*, grew where Wood Street Board School is now built, and became extinct in 1876. Abundant near New Cemetery, 1886; never seen there before.

*SAMBUCUS EBULUS*, grew in great abundance close to the site of Penarth Dock Station, and though not yet extinct is very nearly so.

*INULA CRITHMOIDES*, may become extinct almost any day. Only a very few plants now remaining.

*MONOTROPA HYPOPITYS*, disappeared from the great wood of St. Fagans for 11 seasons, a few plants showing on the 12th, but has not been seen since.

*BRYONIA DIOICA*, has become almost extinct at the Sophia Gardens Field station.

*HERNIERIA CILIATA*, formed dense cushions above tide mark where the Roath Dock entrance now is. Became extinct during the progress of the dock works,

**ATROPA BELLADONNA.** Deadly Nightshade. Reported in Dillwyn's Botanists' Guide for 1805, as occurring in Llandaff Churchyard. Plants were seen as late as 1873, when they were destroyed by scaffolding used in restoring the cathedral.

**ALOPECURUS BULBOSUS.** Observed by Lightfoot in 1780. In 1880 it spread over about 5 or 6 acres of the Upper Grange Moors, almost to the exclusion of other vegetation, but has now been gradually covered by buildings and will probably become extinct within the next 12 months. About a square yard of the roots, removed to Leckwith Moors, seems to be thriving, and will probably escape for a considerable period to come.

**POLYPODIUM CAMBRICUM.** Found by John Ray, in 1690, between Dynas Powis Castle and Cwm George, was completely destroyed by an itinerant fern dealer, about 10 years ago, who uprooted every plant and sold hundreds of them at 1s. each. I bought one of them myself.

Besides the foregoing, which have come under my own observation, Mr. R. Drane, F.L.S., has favoured me with a list of plants collected by himself, in localities so completely altered of late years, that all chance of their re-appearance is completely shut off. I give it here *in extenso* :—

**CAKILE MARITIMA.** From the ground now occupied by Temperance Town, when the surface was 10 feet or more below its present level.

**ACHILLEA PTARMICA, POTERIUM SANGUISORBA, RESEDA LUTEA, RUBIA PEREGRINA, ROSA RUBIGINOSA, SYMPHYTUM OFFICINALE, HYOSCYAMUS NIGER, BORAGO OFFICINALIS, LYSIMACHIA VULGARIS, LATHREA SQUAMARIE, ECHINUM VULGARE, GERANIUM PRATENSE, DIGITALIS PURPUREA, HIPPURIS VULGARIS, VERBASCUM LYCHNITIS, INULA HELENIUM, CHLORA PERFOLIATA, TANACETUM VULGARE,** have all disappeared from the space now called Sophia Gardens, which was waste land in 1857.

**RHAMNUS FRANGULA.** Dissappeared 1885.

**MALVA MOSCHATA.** Nearly gone 1886.

**LYTHRUM SALICARIA.** Nearly gone 1886.

} From the same gardens.

**INULA HELENIUM.** Used to grow on that angular piece of ground formed on the Penarth Road, by its junction with that going up to Llandough Church.

**COLCHICUM AUTUMNALE.** Used to grow between this last point and the tollgate, by the Ely, on the flat ground at foot of the declivity. I fancy the Lime Kiln or its outworks cover the precise spot.

**DAPHNE LAUREOLA.** Used to grow in a dense wood now covered by houses, at Penarth, near where the school house now is, but whether quite extinct *thereabouts* I do not know.

**ASTRAGALUS GLYCYPHYLLOS.** Used to grow just where the Dock Offices now are, and again on the beach, where the road from Plymouth House joins it, at Penarth. Both now gone.

**EPILOBIUM ANGUSTIFOLIUM.** Used to grow abundantly 1859, by the "Old Tan-yard," very near the west wall of the Castle; since taken into Castle garden.

**OPHIOGLOSSUM VULGATUM.** Used to grow abundantly where Biggs' Brewery now stands.

**POTENTILLA COMARUM, GENISTA ANGLICA, SCUTELLARIA MINOR, MONTIA FONTANA, NARTHECIUM OSSIFRAGUM, MENYANTHES TRIFOLIATA, LYSIMACHIA NUMMULARIA, ANAGALLIS TENELLA.** Grew in boggy ground, between the Rhymney Rail and Castle Road. I think it is now Richmond Road.

*CLAYTONIA PERFOLIATA*. Used to grow on hedgebank, now covered by the west side of Castle Road, then called Plucca Lane, before coming to Plas Newydd.

*BUTOMUS UMBELLATUS*, 1858, *SAGITTARIA SAGITTIFOLIA*, 1859, *UTRICULARIA VULGARIS*, 1860. All these grew in reens between Bute Road, and the Canal below St. Mary's Church, and were seen there during the years named, after which they were slowly built out.

*ANTIRRHINUM MAJUS*, *CENTRANTHUS RUBER*. Have disappeared from the old walls of Cardiff Castle—those of the town on the east side, from near North Road to the old tower called Cockmarel on Canal Bank; and on the west side, now Westgate Street.

*MERCURIALIS ANNUA*, *HYPERICUM CALYGINUM*, *VINCA MAJOR*, *POLYGONUM BISTORTA*. Were all growing in Bradley's Lane (now Park Place), in 1860.

*ASARUM EUROPEUM*. I saw on the Embankment, within the Castle Grounds, in 1858 and 1859, not since.

*COTYLEDON UMBILICUS*, *SAXIFRAGA TRIDACTYLITES*, *ASPLENIUM RUTA MURARIA*, *CETERACH OFFICINARUM* (wall), *RANUNCULUS SCCELERATUS* (ditch). These are gone from the Park Wall and Ditch, on the North Road.

*ALLIUM VINEALE*. Has disappeared quite recently from a field between the Taff Railway, and Cathays Terrace, just South of Crwys Farm House. It is now built over.

*SPIRANTHES AUTUMNALIS*. Used to grow abundantly where the new Waterworks now are at the Heath.

*POLEMONIUM*. I failed to find this year at the Heath, just opposite these works, but am not sure that it is gone. Nearly or quite smothered by overgrowth.

*SIBTHORPIA EUROPEA*. Used to grow on a damp wall of a farm yard, about the middle of what is now Woodville Road, Cathays.

*SEDUM TELEPHIUM*. On hedge-bank on Roath Road, by old toll gate, just opposite Wesleyan Chapel now.

## FOREIGN PLANTS.

*Found on the ballast heaps, near Cardiff and Penarth Docks.*

A LARGE number of the vessels, employed in the coal trade from the port of Cardiff, arrive there in ballast, which is discharged and utilized to fill up the low-lying marshy ground near Penarth Ferry and the East Moors, and on the heaps so spread out the seeds of foreign and British plants brought in it from abroad, favoured by the warmth and moisture of the district, vegetate freely. They rarely are allowed to remain undisturbed for a length of time, the ground being used for building and other purposes, so that the life of a ballast plant rarely exceeds a couple of years. As, however, the ballast is being laid down, year by year, a succession of plants spring up, and a ramble over the ballast ground, in the months of July and August, will usually produce most of the species enumerated here. There are several exceptions, however. Some of the plants have been found once or twice only, and have never re-appeared as far as I am aware. As a rule, the plants are natives of the French, Spanish, and Mediterranean coasts. In the annexed list I have given the headquarters of each species from Loudoun's *Encyclopædia of Plants*. The ballast is by no means equally fertile, large areas producing only the most common plants, whereas, a single waggon load spread over a few feet only may produce half a dozen good species. The species belonging to the British Flora that are found on the ballast, usually grow much more luxuriantly, being larger and stronger than the same plants in their native habitats in Britain, and, like the foreign plants, rarely survive more than a season or two. This list could have been much enlarged, by enumerating plants which never flowered, but owing to the greatly increased difficulty of naming them from the vegetative organs alone, and a certain amount of uncertainty, I thought it best not to attempt this. The specimens have been mostly named by the late Hewett Cottrell Watson, Esq., author of the "*Cybele Britannica*," and the "*London Catalogue of British Plants*," so that confidence may be placed in their correctness. Of the foreign plants, sixty could be identified. Of about a dozen the natural order and genus was ascertained; of four or five, the natural order, but not the genus and species was ascertained; and of three, nothing could be made out with certainty. The following list contains only those completely identified.

### *Ranunculaceæ.*

**NIGELLA DAMASCENA.** The Damask Fennel Flower. A native of South Europe, one of the *Helleboreæ*. A few plants of the East Moors, but abundant as a weed at Sully. Escaped from cultivation.

### *Cruciferæ.*

**ALYSSUM INCANUM.** A few plants in 1876, occurring yearly; but seldom long in the same situation.

**CAMELINA FÆTIDA.** Sparingly near Roath Basin, in 1876-7-8, again near Roath Dock, in 1872-3-5-6.

**BUNUS ORIENTALIS.** A native of the Levant. Sparingly near Penarth Ferry, 1876, and near Copper Works, 1880-1-2.

**SISYMBRIUM PANNONICUM.** Native of Hungary. Abundant every year since 1876.

**MATTHOLIA TRICUSPIDATUM.** Found in 1881 and 1886 only.

**IBERIS UMBELLATA.** A common garden plant, near Red House and Penarth Ferry.

**ERYSIMIUM ORIENTALE.** Hare's Ear Treacle Mustard. Very common about the Docks, since 1876.

#### Malvaceæ.

**LAVATERA PUNCTATA.** The Spotted Stalked Tree Mallow. A native of Italy, near the Vitriol Works. A few plants only, 1875-6-7. Not seen since.

**MALVA NICENSIS.** The Nicene Dwarf Mallow. Abundantly in 1875, and sparingly every year since.

**ALTHÆÆ.** A Large Marshmallow. Not unfrequent about Penarth Ferry, in 1880-1-2-5-6.

**MALVASTRUM**, a species with salmon-coloured flowers, has been found once.

**SIDA ALNIFOLIA**, has occurred about three different seasons.

#### Limnanthaceæ.

**LIMNANTHES SULPHUREA.** A native of California. Cultivated as a garden annual in this country. A few plants only, near Penarth Ferry.

#### Zygophyllaceæ.

**TRIBULUS TERRESTRIS.** The Earth Caltrops. A native of South Europe. Was thickly scattered over a patch of pure white gravel, near Bland's timber yard. This singular plant well deserves the name of Caltrops, as the fruit, which is abundant, is so hard and spiky as to be dangerous to a barefooted person. Frequent in 1876. Rare afterwards. Now extinct.

#### Hypericaceæ.

**HYPERICUM ELATUM.** A North American species, found abundantly, apparently wild, near Sully, by Mr. Chapman.

#### Cucurbitaceæ.

**MOMORDICA ELATERIUM.** The Squirting Cucumber. A south European species. Occurs every year on the ballast.

#### Leguminosæ.

**ARTHROLOBIUM SCORPIOIDES.** Joint Vetch. A native of South Europe. Seeded freely on the East Moors, 1876-7. Now extinct. A building covering the place.

**CICER ARIETINUM.** The Ram's-head Crick-pea. A South European species. Fairly abundant on the Penarth Ferry and East Moors ballast.

**CORONILLA SECURIDACEÆ.** Hatchet Vetch. Native of Spain. Not unfrequent where the entrance to Roath Dock now stands. Not found since 1881.

**CORONILLA VARIA.** Very luxuriant at Cogan Pill, but not fruiting well. Rare at East Moors and scarcely flowering, 1876-7-8-9. Not found since 1883.

**SCORPIURUS SUB-VILLOSUS.** The Caterpillar Vetch, or Scorpion's Tail. A South European species. Scores of plants, but few ripened fruit. East Moors only, 1876-7.

**MEDICAGO LITTORALIS.** Shore Medick. An Italian species. A few plants only at East Moors. Seeding freely.



*MEDICAGO MARINA*. Sea Medick. South European species. A few plants which did not flower in 1876. More abundant and flowering freely in 1878.

*ONONIS NATRIX*. The Goatroot of South Europe. Very luxuriant near the Shrimp House, East Moors, 1876-8. Seeding freely.

*MELILOTUS CÆRULEA*. Blue Melilot. A Swiss plant. Occurred occasionally, but did not seed freely. Very finely scented after drying.

*ASTRAGALUS HAMOSUS*. The Hook-podded Milk Vetch. A Spanish species. Occurred about three seasons on the E. Moors ballast, 1875-9.

*HEDYSARUM CORONARIUM*. Garland Hedysarum. Italian species. Occurs every year somewhere. Sometimes very large and fine. Fruiting occasionally when undisturbed, 1873-86.

*TRIFOLIUM PANNONICUM*. Occurred at Penarth, 1876 and 1881. Never fruited.

### Caryophyllaceæ.

*SAPONARIA VACCARIA*. Cowherb. A German species. Occurs in considerable abundance every year. All around Cardiff and Penarth Docks.

*SILENE GALLICA*. French species. Straggling plants have occurred in seasons 1879, 80, 81, 85. Seeding freely, but never appearing successively in same spot.

### Onagraceæ.

*CLARKIA PULCHELLA*. A North American annual. Usually in gardens. Occurred plentifully near Penarth Ferry, in 1875.

### Compositæ.

*SCOLYMUS HISPANICUS*. The Spanish Golden Thistle. Maintains its ground well. It has flowered abundantly every year since 1873, about the vicinity of the Anchor Test Works, Penarth Road, and near Leckwith Common. Seeds form, but do not usually ripen. It is a very showy plant in summer.

*SANTOLINA ANTHEMOIDES*. The Chamomile-leaved Lavender Cotton. A native of Italy. Found on ballast, near Penarth, by Mr. Thomas Chapman.

*CRYPTOSTEMMA CALENDULACEUM*. A native of the Cape of Good Hope. One or two plants only, near Red House.

*GRINDELIA SQUARRROSA*. Snake-headed Grindelia. A native of United States. Fairly plentiful on Penarth Ferry ballast in 1879 and 1880.

*INULA VISCOSA*. A South European species. Occurred near the Vitriol Works, East Moors, in 1875. Not noticed since.

*CENTAUREA MELITENSIS*. The Maltese Star Thistle. A few plants every year since 1875. E. Moors usually.

*XANTHIUM SPINOSUM*. A South of Europe species. Frequent every year, but never fully ripens fruit.

*AMBROSIA MARITIMA*, occurs every year since 1873, flowering freely, but never fruiting.

### Scrophulariaceæ.

*LINARIA CÆSIA*. A South European species. A few plants nearly every year, about Penarth.

*SCROPHULARIA CANINA* var. *PINNATIFIDA*. Frequent on East Moors and bank of Taff, near Chain Testing Works, 1875-82, when it was destroyed by new railway.

#### **Boraginaceæ.**

*CYNOGLOSSUM MONTANUM*. Occurred in 1879, and again in 1882, near Red House.

*HELIOTROPIUM EUROPEUM*. European Turnsole. Found every year on some part of the ballast banks.

*ECHINOSPERMUM LAPPULA*. Found occasionally in 1875-1876.

#### **Labiataæ.**

*SIDERITIS MONTANA*. An Austrian species. Only about 2 or 3 plants found in 1875. Not noticed since.

*SALVIA VERTICILLATA*. German species. Is found in small numbers nearly every year.

*STACHYS ITALICA*. A large, showy South European species. Occasionally a stray plant may be found.

#### **Polemoniaceæ.**

*GILIA CAPITATA*. North American species. A few plants in 1881, by Mr. Chapman.

#### **Solanaceæ.**

*HYOCYAMUS ALBUS*. A very showy South European species. Was found in great abundance (hundreds of plants) in 1882, near Shrimphouse. Not noticed since.

#### **Plantaginaceæ.**

*PLANTAGO ARENARIA*. Sand Plantain. Is found somewhere on the ballast every year. In 1881 it was very abundant.

#### **Amaranthaceæ.**

*AMARANTHUS CHLOROSTACHYS*. South European species. A few plants near Roath Basin, in 1875. A few near Leckwith Common in 1886.

#### **Polygonaceæ.**

*POLYGONUM CUSPIDATUM*. Very abundant on the cinder tips, near Maesteg.

#### **Chenopodiaceæ.**

*CHENOPODIUM AMBROSIOIDES*. Nearly every year a few plants are to be found at E. Moors, or Penarth Ferry.

*CHENOPODIUM MULTIFIDUM*. In 1879 and 1886 a few plants only.

**Urticacæ.**

**CANNABIS SATIVA.** Common Hemp. Frequent every season, on waste ground, on the outskirts of Cardiff. Mostly male plants.

**Amaryllidacæ.**

**NARCISSUS TAZETTA.** A Spanish species. A few plants on ballast, near Penarth Ferry, in 1875. Not noticed since.

**Gramineæ.**

**AIRA CANESCENS.** Silvery Hair Grass. At several times in 1878-1886, but not in any quantity.

**CRYPIS SCHENOIDES.** A few plants, in 1875, also in 1884.

**ZEAMAYS.** Indian Corn. Occurs frequently, and sometimes attains a height of 7 feet.

**PANICUM MILIACEUM.** Indian Millet. Near the Docks, nearly every year since 1875. A few plants.

**LEPTURUS INCURVATUS.** Not uncommon, but not in any quantity.

**ÆGILOPS OVATUS.** The reputed origin of the cultivated wheat, a South European species, appears every year sparingly, in 1878, very abundant.

**ÆGILOPS TRUNCIALIS.** Much rarer than last, only noticed in 1879 and 1884.

**ALOPECURUS UTRICULATUS.** An Italian species, sometimes occurs in considerable quantity.

**PHALARIS PARADOXA.** A native of the Levant, not uncommon every season.

**PHALARIS CÆRULESCENS.** A Spanish species. Not uncommon. Specially abundant in 1885.

Besides these strictly foreign plants, there are a large number of British species which spring from foreign seeds imported in the ballast, most of them not occurring in the district elsewhere; they are, however, incorporated into the text.

Since the above lists were first written, the largely increased numbers of collier vessels fitted to carry water ballast, has materially reduced the quantity annually deposited near Cardiff, and at no distant date our Ballast Flora may be considerably circumscribed. As it is, few of the ballast plants stray very far beyond the limits of their first habitat, and they either succumb to the climate or building operations within a year or two.

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# INDEX.

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# INDEX.

	PAGE.
EXOGENS—THALAMIFLORÆ .....	12—26
„ —CALYCIFLORÆ .....	26—43
„ —COROLLIFLORÆ .....	43—70
„ —MONOCHLAMYDÆ .....	70—79
ENDOGENS—DICTYOGENS .....	80
„ —PETALOIDEÆ .....	80—87
„ —GLUMACEÆ .....	88—101
ACROGENS .....	102—106
EXTINCTIONS .....	107—109
FOREIGN PLANTS ON BALLAST .....	110—114

## NATURAL ORDERS.

	PAGE.		PAGE.
Aceraceæ .....	7, 25	Compositæ .....	8, 46
Alismaceæ .....	10, 84	Coniferæ .....	10, 79
Amaranthaceæ .....	9, 70	Convolvulaceæ .....	9, 57
Amaryllidaceæ .....	10, 82	Cornaceæ .....	8, 38
Amentiferæ .....	10, 77	Crassulaceæ .....	8, 37
Apocynaceæ .....	9, 56	Cruciferæ .....	7, 15
Aracaceæ .....	11, 86	Cucurbitaceæ .....	8, 36
Araliaceæ .....	8, 38	Cyperaceæ .....	11, 89
Balsaminaceæ .....	7, 26	Dipsacaceæ .....	8, 45
Berberidaceæ .....	7, 14	Droseraceæ .....	7, 20
Boraginaceæ .....	9, 66	Empetraceæ .....	9, 74
Callitrichaceæ .....	10, 76	Equisitaceæ .....	11, 102
Campanulaceæ .....	8, 42	Ericaceæ .....	8, 55
Caprifoliaceæ .....	8, 43	Euphorbiaceæ .....	9, 75
Caryophyllaceæ .....	7, 21	Filices .....	11, 103
Celastraceæ .....	7, 26	Fumariaceæ .....	7, 15
Chenopodiaceæ .....	9, 71	Gentianaceæ .....	9, 56
Cistaceæ .....	6, 20	Geraniaceæ .....	7, 25

	PAGE.		PAGE.
Gramineæ.....	11, 92	Plantaginaceæ .....	9, 70
Grossulariaceæ .....	8, 36	Plumbaginaceæ .....	9, 69
Haloragiaceæ .....	8, 35	Polemoniaceæ .....	9, 57
Hydrocharidaceæ .....	10, 84	Polygalaceæ.....	7, 20
Hypericaceæ .....	7, 24	Polygonaceæ .....	9, 72
Ilicaceæ .....	9, 56	Portulacæ .....	8, 36
Illecebraceæ.....	8, 36	Primulaceæ .....	9, 68
Iridaceæ .....	10, 82	Ranunculaceæ .....	6, 12
Jasminaceæ .....	9, 56	Resedaceæ .....	7, 19
Juncaceæ .....	10, 87	Rhamnaceæ .....	7, 27
Labiataæ .....	9, 62	Rosaceæ .....	8, 31
Leguminosæ .....	8, 27	Rubiaceæ .....	8, 44
Lemnaceæ .....	11, 87	Santalaceæ .....	9, 74
Lentibulariaceæ .....	9, 68	Saxifragaceæ .....	8, 37
Liliaceæ .....	10, 83	Schleranthaceæ .....	9, 74
Linaceæ .....	7, 23	Scrophulariaceæ .....	9, 58
Loranthaceæ .....	8, 38	Solanaceæ .....	9, 57
Lycopodiaceæ.....	11, 102	Tamaceæ .....	10, 80
Lythraceæ .....	8, 36	Tiliaceæ .....	6, 24
Malvaceæ .....	7, 23	Thymelaceæ.....	9, 74
Marsileaceæ.....	11, 102	Trillaceæ .....	10, 80
Naiadaceæ .....	11, 85	Typhaceæ.....	10, 87
Nymphaeæ .....	7, 14	Ulmaceæ .....	10, 76
Onagraceæ .....	8, 35	Umbelliferae .....	8, 38
Orchidaceæ .....	10, 80	Urticaceæ .....	10, 76
Orobanchaceæ .....	9, 61	Valerianaceæ .....	8, 45
Oxalidaceæ .....	7, 26	Verbenaceæ .....	9, 62
Papaveraceæ .....	6, 14	Violaceæ .....	7, 20

## INDEX TO GENERA.

	PAGE.		PAGE.
Acer .....	25	Alopecurus .....	94
Achillea.....	54	Alsine .....	22
Aconitum .....	14	Althæa .....	24
Adiantum .....	104	Alyssum .....	17
Adonis .....	12	Amaranthus .....	70
Adoxa .....	38	Ammophila .....	93
Ægopodium .....	40	Anacharis .....	84
Ænanthe .....	42	Anagallis .....	68
Æthusa.....	42	Anchusa .....	67
Agrimonia.....	32	Anemone .....	12
Agrostis.....	95	Angelica .....	42
Aira .....	107	Antennaria .....	51
Ajuga.....	63	Anthemis .....	54
Alchemilla .....	31	Anthoxanthum.....	93
Alisma .....	85	Anthriscus .....	39
Alliaria .....	18	Anthyllus .....	27
Allium .....	83	Antirrhinum .....	60
Allosorus .....	104	Apargia.....	48
Alnus .....	77	Apera.....	95

# INDEX.

119

	PAGE.		PAGE.
Apium .....	40	Caucalis .....	39
Aquilegia .....	14	Centaurea .....	50
Arabis .....	19	Centranthus .....	45
Arctium .....	50	Cerastium .....	23
Arenaria .....	22	Ceterach .....	103
Armeria .....	70	Chærophyllyum .....	41
Armoracia .....	16	Chelidonium .....	15
Arrhenatherum.....	101	Chenopodium .....	71
Artemisia .....	54	Cheiranthus .....	17
Arthrolobium .....	30	Chlora .....	56
Arum .....	86	Chrysanthemum .....	53
Asparagus .....	83	Chrysosplenium .....	38
Asperugo .....	67	Cichorium.....	46
Asperula .....	44	Circæa .....	35
Asplenium.....	105	Clematis .....	12
Aster .....	52	Cochlearia.....	16
Astragalus .....	30	Comarum .....	33
Athyrium .....	106	Conium .....	40
Atriplex .....	72	Convallaria .....	83
Atropa .....	58	Convolvulus .....	57
Avena .....	100	Coriandrum .....	42
Ballota .....	64	Cornus .....	38
Barbarea .....	19	Coronopus.....	16
Bartsia .....	59	Corydalis .....	15
Bellis .....	53	Corylus .....	77
Berberis .....	14	Cotyledon .....	37
Beta .....	72	Crambe .....	15
Betonica .....	65	Cratægus .....	34
Betula .....	77	Crepis .....	47
Bidens .....	50	Crithmum .....	41
Blechnum .....	105	Cyclamen .....	69
Borago .....	66	Cynodon .....	93
Botrychium .....	103	Cynoglossum .....	67
Brassica.....	18	Cynosurus .....	97
Briza .....	98	Cystopteris .....	105
Bromus .....	99	Dactylus .....	100
Bryonia .....	36	Daphne .....	74
Bunium .....	40	Datura .....	58
Bupleurum .....	39	Daucus .....	39
Butomus .....	84	Delphinium .....	14
Buxus .....	75	Dianthus .....	21
Cakile .....	15	Diplotaxis .....	19
Calamintha .....	65	Dipsacus .....	45
Callitriche.....	76	Digitalis .....	60
Calluna .....	55	Digitaria .....	93
Caltha .....	13	Doronicum .....	53
Calystegia.....	57	Draba .....	17
Camelina .....	16	Drosera .....	20
Campanula .....	43	Echium .....	66
Capsella .....	17	Eleocharis.....	91
Carduus.....	49	Elymus .....	97
Cardamine .....	19	Empetrum.....	74
Carex.....	89	Epilobium .....	35
Carlina .....	48	Epipactis .....	11
Carpinus .....	77	Equisetum .....	102
Carum .....	40	Erica .....	55
Castanea .....	77	Erigeron .....	52
Catabrosa .....	98	Eriophorum .....	91



	PAGE.		PAGE.
Erodium .....	25	Juniperus .....	79
Eryngium .....	38	Knautia .....	45
Erysimum .....	17	Koeleria .....	97
Erythræa .....	57	Koniga .....	17
Euonymus .....	26	Lactuca .....	46
Eupatorium .....	51	Lagurus .....	95
Euphorbia .....	75	Lamium .....	64
Euphrasia .....	59	Lapsana .....	46
Fagus .....	77	Lastrea .....	104
Fedia .....	45	Lathræa .....	62
Festuca .....	100	Lathyrus .....	30
Filago .....	51	Lavatera .....	24
Fœniculum .....	41	Lemna .....	87
Fragaria .....	33	Leonorus .....	63
Fraxinus .....	56	Lepidium .....	16
Fumaria .....	15	Lepturus .....	92
Gagea .....	83	Leucojum .....	83
Galanthus .....	82	Ligustrum .....	56
Galeobdolon .....	63	Linaria .....	60
Galeopsis .....	64	Linosyris .....	51
Galium .....	44	Linum .....	23
Gastidium .....	94	Listera .....	81
Genista .....	27	Lithospermum .....	66
Gentiana .....	57	Littorella .....	70
Geranium .....	25	Lobelia .....	42
Geum .....	32	Lolium .....	96
Glaucium .....	15	Lonicera .....	44
Glaux .....	68	Lotus .....	29
Gnaphalium .....	51	Luzula .....	88
Gymnadenia .....	80	Lychnis .....	21
Habenaria .....	80	Lycopodium .....	102
Hedera .....	38	Lycopsis .....	67
Helianthemum .....	20	Lycopus .....	62
Helleborus .....	13	Lysimachia .....	69
Helminthia .....	48	Lythrum .....	36
Helosciadium .....	41	Malva .....	23
Heracleum .....	42	Marrabium .....	65
Hernieria .....	36	Matricaria .....	53
Hesperis .....	18	Meconopsis .....	15
Hieracium .....	47	Medicago .....	29
Hippurus .....	35	Melilotus .....	27
Holcus .....	99	Melissa .....	65
Honckenya .....	21	Melittis .....	65
Hordeum .....	95	Melampyrum .....	59
Humulus .....	76	Mentha .....	62
Hydrocharis .....	84	Menyanthes .....	56
Hydrocotyle .....	39	Mercurialis .....	75
Hymenophyllum .....	103	Mespilus .....	34
Hyoscyamus .....	58	Milium .....	95
Hypericum .....	24	Mimulus .....	61
Hypochæris .....	48	Mœnchia .....	22
Iberis .....	17	Mœhringia .....	21
Ilex .....	56	Molinia .....	99
Impatiens .....	26	Monotropa .....	56
Inula .....	52	Montia .....	36
Isolepis .....	92	Myosotis .....	67
Iris .....	82	Myrica .....	79
Jasione .....	42	Myriophyllum .....	35
Juncus .....	87	Myrris .....	41

	PAGE.		PAGE.
Narcissus .....	82	Prunus .....	31
Narthecium .....	84	Pteris .....	103
Nardus .....	93	Pulicaria .....	52
Nasturtium .....	19	Pulmonaria .....	66
Neottia .....	81	Pyrethrum .....	54
Nepeta .....	65	Pyrus .....	34
Nuphar .....	14	Quercus .....	77
Nymphæa .....	14	Radiola .....	23
Oenothera .....	35	Ranunculus .....	12
Onobrychis .....	29	Raphanus .....	17
Ononis .....	27	Reseda .....	19
Onopordium .....	49	Rhamnus .....	27
Ophioglossum .....	103	Rhinanthus .....	59
Ophrys .....	82	Ribes .....	36
Orchis .....	81	Rœmeria .....	15
Origanum .....	63	Rosa .....	33
Ornithogalum .....	83	Rubia .....	44
Ornithopus .....	30	Rubus .....	32
Orobanche .....	61	Rumex .....	72
Orobis .....	31	Ruscus .....	83
Osmunda .....	103	Rhynchospora .....	91
Oxalis .....	26	Sagina .....	22
Oxycoccus .....	55	Sagittaria .....	85
Panicum .....	93	Salicornia .....	71
Papaver .....	14	Salix .....	78
Parietaria .....	76	Salsola .....	71
Paris .....	80	Salvia .....	62
Parnassia .....	38	Sambucus .....	43
Pastinaca .....	42	Samolus .....	69
Pedicularis .....	60	Sanguisorba .....	32
Peplis .....	36	Sanicula .....	39
Petasites .....	51	Saponaria .....	21
Petroselinum .....	41	Saxifraga .....	37
Phalaris .....	94	Scabiosa .....	46
Phleum .....	94	Scandix .....	39
Phragmites .....	99	Schlerochloa .....	98
Phyteuma .....	43	Schoenus .....	91
Picris .....	48	Scilla .....	83
Pilularia .....	102	Scirpus .....	91
Pimpinella .....	40	Scleranthus .....	74
Pinguicula .....	68	Scolopendrium .....	105
Pinus .....	79	Scrophularia .....	61
Plantago .....	70	Scutellaria .....	66
Poa .....	97	Sedum .....	37
Poenia .....	14	Sempervivum .....	37
Polemonium .....	57	Senecio .....	53
Polycarpon .....	36	Serratula .....	50
Polygala .....	20	Setaria .....	93
Polygonum .....	73	Sherardia .....	45
Polygonatum .....	84	Sibthorpia .....	60
Polypodium .....	104	Silene .....	21
Polypogon .....	95	Silybum .....	49
Polystichum .....	104	Sinapis .....	18
Populus .....	78	Sisymbrium .....	18
Potentilla .....	33	Sium .....	41
Poterium .....	32	Smyrnium .....	40
Potamogeton .....	85	Solanum .....	57
Primula .....	69	Solidago .....	52
Prunella .....	66	Sonchus .....	47

	PAGE.		PAGE.
Sparganium .....	87	Trigonella.....	29
Specularia.....	43	Triodia .....	97
Spergula .....	23	Trolius.....	13
Spiræa .....	31	Tussilago.....	52
Spiranthes.....	81	Taxus .....	79
Sarothamnus .....	27	Typha .....	87
Stachys .....	65	Ulex .....	27
Staphylea .....	26	Ulmus .....	76
Statice .....	69	Urtica .....	76
Stellaria.....	22	Utricularia .....	68
Sueda.....	71	Vaccinum .....	55
Symphytum.....	67	Valeriana .....	45
Tamus .....	80	Verbascum .....	61
Tanacetum .....	54	Verberna.....	62
Taraxacum .....	47	Veronica .....	58
Teucrium .....	63	Viburnum .....	43
Thesium .....	74	Vicia .....	30
Thlaspi .....	17	Vinca .....	56
Thymus.....	63	Viola .....	20
Tilia .....	24	Viscum .....	38
Torilis .....	39	Wahlenbergia .....	43
Tragopogon .....	48	Xanthium .....	55
Tricritum .....	96	Zannichelia .....	85
Trifolium .....	28	Zostera .....	85
Triglochin.....	85		

## WELSH NAMES.

	PAGE.		PAGE.
Abaits .....	18	Arian .....	59
Aban .....	53	Arlladlys .....	57
Adain-fredynen .....	104	Aspygan .....	53
Aedorw .....	38	Astyllenlys .....	70
Aethnen.....	78	Anfri .....	38
Aethwydden.....	78	Baldar .....	80, 81
Afal Adda .....	80	Banadlen .....	27
Afallen .....	34	Banadlos .....	27
Afanllwyn .....	32	Banhallen .....	27
Afalwydden .....	34	Bara can a llaeth .....	22
Alan mawr .....	51	Bara can y cwccw .....	26
Alan bychan .....	52	Bara can y defaid .....	70
Alaw .....	14, 83, 84	Bara 'r Cythrawl .....	46
Alisantr y Ddulys .....	40	Bara 'r Hwch .....	69
Amlaethai .....	20	Barfryn .....	88
Amrain .....	41, 39	Barf yr afar .....	48
Amranwen.....	53	Barf y Bwch.....	48
Amrhylwydd .....	52	Barf y gwr Hen .....	12
Amrywiaeth.....	21, 55	Barthlys .....	76
Archmain .....	70	Baw mwcci .....	50
Arfog .....	18	Bedw .....	77

	PAGE.		PAGE.
Bedwen.....	51, 77	Briwlys .....	65
Beidiawg .....	54, 65	Brigwydd.....	44
Beidiawg Rudd .....	73	Briw 'r March .....	62
Beisdonell Merllyn .....	70	Bronwen .....	53
Bela .....	58	Bronwerth .....	66, 67
Bendigeidlys.....	32	Bronwst.....	13
Benndu .....	51	Bronwys .....	13
Berfain .....	18	Brymlys.....	62
Berw .....	79	Brytwn .....	54
Berwr y moch .....	16, 17, 18	Bryweg y cerrig .....	37
Berwr Taliesen .....	37	Brynwen .....	88
Berwr yr iar .....	73	Bulwg Rhufain.....	21
Berwyr gwillt .....	16, 17	Brywnwen .....	85
Beryn Chwerw.....	17	Bustl y ddaear .....	57
Beryw .....	79	Buliog ffrengig .....	14
Betysen .....	72	Bwlitis .....	14
Beulith .....	59	Bwrli .....	79
Biwlith .....	59	Bwtais .....	83
Blaen y conyn ar y mel .....	32	Bwyd .....	87
Blaen y gwaew.....	13	Byddarllys .....	37
Blaen yr iwrch.....	75	Byddon .....	51
Bleidd-dag .....	14	Bydiawg .....	54, 65
Bleidd-drem .....	67	Byfwyth .....	37
Blewog .....	61	Bylwys llydanddail.....	37
Blewynog .....	47	Bysedd cochion .....	60
Blodau Ammor.....	70	Bysedd yr car .....	17
Blodau yr ymenyn .....	13	Byswellt .....	100
Blodau'r brenin .....	14	Bywi .....	40
Blodau 'r .....	21	Bywydog .....	37
Blodau 'r y gog .....	19	Caca Mwcci .....	50
Blodau 'r gwynt .....	12	Cacamwcci .....	55
Bloneg y ddaear .....	36	Cadafarth .....	18
Blodeuyn y fran .....	21	Cafeled .....	87
Blodeuyn y gog .....	19	Caill y ci .....	81
Blodeuyn-y-gwynt .....	12	Caineirian .....	81
Blodeuyn Rudd .....	21	Cala 'r .....	86
Blyny-ddawl y dwr .....	19	Caldrist .....	81
Bogail .....	37	Caliwlyn y Mel .....	32
Bogail y forwyn .....	37	Cammined y dwr .....	82
Bogeil-llys.....	37	Camri .....	54
Boglynon .....	38	Camry .....	54
Boled Olwen.....	57	Candoll .....	24
Botasen y gog .....	83	Canhanawl .....	76
Brathlys.....	68	Canhewin .....	37
Brauwydd .....	27	Canrhi .....	56
Brechlys .....	22	Cantafawd.....	76
Brefar .....	62	Canwraidd .....	73
Breflys .....	62	Canwyll frwynen.....	88
Breninllys.....	65	Carddwy .....	41
Bresych y cwn.....	75	Carnedd felen .....	53
Bresych y mor.....	15	Carn yr ebol .....	52
Bresych yr ydd .....	18	Cartheig .....	46
Brial y gors .....	38	Carwas .....	41
Brial y Mair .....	69	Cas gan arddwr .....	27
Briallu .....	69	Cas gan bladurwr .....	93
Briger y twynau .....	44	Cas gan cythraul.....	62
Briger .....	104	Castenwydden .....	77
Brigwellt .....	98	Cawnen ddu .....	93
Brigwlydd.....	76		

	PAGE.		PAGE.
Cedor y wrach .....	23	Corbysen .....	30
Cedowrach .....	50	Corfanadl .....	27
Cedowys .....	52	Corfeillionen .....	29
Cedu .....	18	Corfrwynen .....	88
Cegigen .....	40	Cor Helygen .....	79
Ceilion .....	44	Corn carw .....	41
Ceilliau 'r ci .....	81	Cornwlydden .....	2
Ceinioglys .....	60	Corn y bwch .....	62
Ceirchwellt .....	101	Corn yraf .....	62
Ceiriosen .....	31	Cor-rosyn .....	20
Ceios y waun .....	55	Corswigen .....	44
Celyn .....	56	Corsen .....	99
Celyn Mair .....	83	Corsfrwynen .....	91
Cenhinen .....	82, 83	Corswellt .....	94
Cerddinen .....	34	Corwelyn .....	92
Cherwyn y twyn .....	63	Corweiddrydd .....	45
Chwerlys .....	54	Corwlyddyn .....	22
Chwerwlys yr eithin .....	63	Corysgawen .....	43
Chwerwyn .....	54	Costog y dom .....	74
Chwys Arthur .....	31	Cracheithenen .....	27
Chwys Mair .....	13	*Crafangc y fran .....	12, 13
Chwysigenwraidd .....	68	Craf gwillt .....	84
Chwysoglen .....	72	Cray y geifr .....	84
Ciawg .....	50	Craith un nos .....	66
Ciros gwyn .....	34	Crammenog .....	50
Claerlys .....	69	Creiglys .....	74
Clafrylys .....	46	Creithig .....	39, 40, 41
Clais yr hudd .....	75	Creoso gwanwyn .....	82
Clais .....	46	Creoso haf .....	83
Cleddyflys .....	87	Creulys bendedig .....	24
Clefryn .....	43	Creulys Mair .....	43
Cloch baban .....	82	Criafallen .....	34
Cloch yr eos .....	83	Cribau St. Fraid .....	65
Clofrwym y mwcci .....	57	Cribaur bleiddiau .....	50
Clor y brain .....	38	Cribell .....	50
Clor .....	40	Crinnyls .....	20
Clustog Fair .....	70	Crogedyf .....	31
Clust yr Ewig .....	74	Cron .....	42
Clwm Eulyn berllys .....	39	Cron-doddaid .....	37
Clwprwynen .....	91	Cronell .....	13
Clych Enid .....	83	Crwynllwys .....	57
Clychlys .....	43	Crydaethnen .....	78
Clych y perthi .....	57	Cwccwl y mynach .....	14
Clymmog .....	73	Cwlwm cariad .....	80
Clyst yr arth .....	39	Cwlwm yr asgrwn .....	75
Cneuen .....	40	Cwlyn y mel .....	32
Cochwraidd .....	44	Cwyros .....	38
Codawg .....	30	Cwyrwialen .....	38
Codawydd Meddyg Mair .....	52	Cyccylog .....	66
Codwarth .....	58	Cyddlin .....	17
Coed y wasg y maes .....	17	Cyd-dyf .....	56
Coeg fefusen .....	33	Cydd y coed .....	12
Collen .....	77	Cyfordwf .....	67
Coll-lwyn .....	77	Cylor .....	40
Coluddion y diawl .....	12	Cyngafan .....	44, 67
Colyddlys .....	62		

\* *Crafangc* not *Cranfrangc* as erroneously printed in the text.

	PAGE.		PAGE.
Cynhowlen .....	25	Eiriawl .....	82
Cynfon tittw .....	19	Eirin Mair .....	36
Cynffon y capwilt .....	45	Eirin berth .....	31
Cynffon y gath .....	87	Eiryaidd .....	83
Cyngaf .....	50	Eithenen .....	27
Cynghawfawg .....	57	Elinog .....	74
Daggrau Addaf .....	26	Ellast .....	49
Dagrau Mair .....	69	Engraff .....	85
Dail llydan y fford .....	70	Erfinon .....	18
Dail llwyn y neidr .....	70	Erinllys .....	24
Dail y tryfan .....	51	Erlysg .....	56
Dail y Twrch .....	24	Erwaint .....	31
Dalen dda .....	75	Eulyn berllys .....	39
Dannogen .....	61, 65	Eurllys .....	72
Dant y llew .....	47	Eurwialen .....	52
Dant y pisgodin .....	50	Fagwyr wenn .....	14
Ddraenen ddu .....	31	Fettur .....	01
Ddraenen wen .....	34	Fiolydd .....	20
Ddrewsawr .....	64	Ffawydd .....	77
Ddulys .....	40	Ffaen y gors .....	56
Deilen-gron .....	37	Ffenigl .....	41
Deintlys .....	62	Ffenigl y cwn .....	54
Derwen .....	77	Ffion y ffridd .....	60
Derwen Caersalem .....	71	Ffiol redynen .....	105
Deulen ddu dda .....	61	Fflamgoed .....	75
Diadwyth .....	45	Ffromlys .....	26
Dibynior .....	42	Ffugbysen .....	30
Dilosg .....	37	Ffynidwydd .....	79
Dilwydd felen .....	15	Garleg gwillt .....	84
Dinodd .....	74	Garlegog .....	18
Disawr .....	18	Gellhesgen .....	81
Draenera ysbinus .....	14	Gelly-bren .....	34
Drigon .....	73	Geuberllys .....	42
Dringiedydd .....	12	Geuperwraidd .....	30
Dringol .....	73	Gith .....	21
Duegfredynen .....	103	Gladlys .....	21
Duglwyd .....	27	Glas y llwyn .....	83
Dugoesog .....	105	Glesyn .....	63, 66, 67
Duwallt y forwyn .....	105	Gliniogai .....	59
Dyfr-foronyn .....	41	Gloewlys .....	59
Dyfr-llys .....	86	Gloria .....	82
Dyfr Lyriad .....	85	Glydlys arfor .....	21
Dyfrwlyddyn .....	36	Glyf .....	23
Dynad .....	64	Godwyllon .....	24
Dynhaden .....	76	Goferini .....	58
Dystrewlys .....	55	Golendrem .....	59
Ebolgarn .....	57	Gold yr yd .....	53
Edaffedog .....	51	Golchyddes .....	39
Effros .....	59	Golchwraidd .....	39
Efryn parhaus .....	96	Golchemid .....	63
Efwr .....	42	Gold y gors .....	13
Egfaenwydd .....	34	Golwg Crist .....	62
Egel .....	69	Gorhadawg .....	23
Eglyn .....	38	Gorhiliig .....	36
Egroeswydd .....	34	Gornerth .....	61
Eiddew .....	38	Gorthyfail .....	40, 41
Eidral .....	65	Gorudd .....	59
Eigryn .....	98	Graban .....	50
Eirenen Bulas .....	31	Graeanllys .....	58

	PAGE.		PAGE.
Greol .....	36	Hel-lys yspigawg .....	71
Greulys .....	53	Henllydan y fford .....	70
Greuolen .....	36	Helygen .....	78, 79
Grug .....	55	Helyglys .....	35
Gruw .....	63	Heonllys .....	38
Gruwllys .....	63	Hesgen .....	87, 89, 90, 91
Grwyswydd .....	36	Hoccys .....	23, 24
Gwaedlys .....	59, 73	Hosanau .....	81
Gwaed y gwyr .....	24, 43	Hwp yr ychen .....	27
Gwaglwylfen .....	24	Hydef blewog .....	19
Gwalchlys .....	47	Hydyf .....	19
Gwallt y forwyn .....	105	Hylithr .....	13, 82
Gwanwden .....	56	Hyll-gryg .....	82
Gwyarllys .....	36	Iorwg .....	38
Gwell na 'r aur .....	45	Jeutawdd .....	59
Gwelt y gamlas .....	85	Llaeth bron Mair .....	66
Gwendon .....	44	Llaeth y cythraul .....	75
Gwenith y brain .....	37	Llaethwyg .....	30
Gwenith yr bwch .....	74	Llaeth y geifr .....	44
Gwenith yr hydd .....	74	Llaeth ysgallen .....	47
Gwenith ysgyfarnog .....	98	Llafn y bladur .....	84
Gwenith-wellt .....	96	Llai y perthi .....	44
Gweunwelt .....	97	Llawathan .....	57
Gwenwlydd .....	44	Llaw redynen .....	104
Gwenynof .....	66	Llemyg .....	69
Gwemen .....	77	Ller .....	99
Gwerog .....	70	Llewig y blaid .....	76
Gwiberlys .....	66	Llewpard-dag .....	53
Gwifwrnwydd y gors .....	44	Llewyl y llyngyr .....	13
Gwillffrai .....	55	Lili melyn y dwr .....	14
Gwillon .....	83	Lili 'r dwr .....	14
Gwinwydden .....	80	Llithlys .....	50
Gwiolydd .....	20	Llin .....	23, 60
Gwilydd y perthi .....	44	Llinhad .....	87
Gwlithlys hirdail .....	20	Llinhesg y dwr .....	76
Gwlydd .....	21, 22, 68, 69	Llowrig .....	56
Gwlyddyn .....	68	Loer-redynen .....	103
Gwreiddrudd .....	44	Lychlyn .....	58
Gwrnerth .....	58	Lyriad .....	70
Gwrwgawn .....	100	Llusen .....	55
Gwydd-droed .....	71	Lluglys ysgar .....	21
Gwyddfid .....	44	Llun troed yr ebol .....	52
Gwyddlwyn .....	32	Lluswydden .....	55
Gwydro .....	27	Llwyd .....	33, 51, 65
Gwylaeth .....	45, 46, 48	Llwydlas .....	15
Gwylltgeirch .....	101	Llwyf .....	76
Gwyn y merched .....	33	Llwyfain .....	76
Gwraiddiriog .....	40	Llwyfanen .....	76
Gwyrddling .....	79	Llwyglys .....	52
Gwysglys .....	38	Llynwlyddyn .....	85
Gylfinog .....	82	Llys Angel .....	42
Gysplys .....	42	Llys Bened .....	32
Gystlys .....	54	Llys cadwgan .....	45
Haidd y mor .....	95	Llys Crist .....	20
Halogen .....	40	Llys y crymman .....	68
Heboglys .....	47	Llys y cwlwm .....	67
Heddig gwilt .....	17	Llys y cywer .....	44
Hegydd y morlan .....	16	Llys y ddidol .....	69
Hel-las .....	68	Llys y din .....	73

	PAGE.		PAGE.
Llys y bwstwm.....	17	Malw-yr-hel .....	24
Llys y cwsgr.....	14	Mantell Mair .....	32
Llyisiau Llewellyn .....	58	Man y don .....	70
Llygad y cythraul .....	15	Marchalen.....	52
Llygad y ddyd.....	53	March ysgallen .....	49
Llygaid y dynawed.....	13	March redynen.....	104, 105
Llygaid Ebrill .....	13	March-fiaren.....	34
Llygaid y goedair.....	12	March feillionen .....	28, 29
Llygadlys .....	15	Marddanadlen .....	64, 65
Llygad ysgyfarnog .....	33	Marddynad .....	64, 65
Lyriad corn y Carw.....	70	Masarn .....	25
Llyfenwy .....	28	Masarnwydd.....	25
Llygaeron .....	55	Maswellt .....	99
Llyrllys .....	71	Meddalai .....	23
Llyn y llygaid .....	15	Meddlys .....	31
Llyrcadys .....	62	Meddyglyn .....	39
Llys y dommen.....	74	Meddyg y bugail .....	52
Llys y drindod .....	20	Meddyges las .....	66
Llys y dwyfawg .....	65	Mefusen.....	33
Llys p dyfrglwyf.....	83	Meiwyn .....	58
Llys Efa .....	70	Meillionen.....	27
Llys yr eryr .....	45	Melawg .....	61
Llys y famaeth.....	75	Melged arfor.....	72
Llys y fors .....	36	Melicwellt.....	95
Llys y fuddau .....	32	Melottai .....	23
Llys y gingroen.....	53	Melsugn .....	61
Llys y gwaedlif .....	55	Mel y cwn.....	61
Llys y gwrid .....	67	Mel y gweunydd.....	61
Llygwyn .....	72	Melynnydd.....	48
Llys y gwrda .....	71	Melynog .....	27
Llys y gymmalwst.....	40	Melyneuraidd.....	52
Llys y gynddaredd .....	52	Melyn y gauaf .....	18
Llys yr hidl .....	44	Melyngu .....	19
Llys yr hudol .....	62	Melyn y twynau .....	23
Llys yr hudolesau.....	62	Melyn wellt .....	93
Llys 'r hychgryg.....	82	Menyg .....	21, 60
Llysyrllys .....	32	Merllys .....	83
Llys Melyn .....	27	Mers .....	40
Llys y milwr.....	36	Merys.....	34
Llys y neidr .....	73	Merywen .....	79
Llys y parlys .....	69	Mesuraidd .....	63
Llys pentai .....	37	Meuswellt .....	96
Llys perfigedd .....	24	Miled wellt .....	95
Llys y poer .....	21	Mierifrengig .....	34
Llys Simwnt.....	23	Milddail .....	55
Llys y sipsiwm.....	62	Millfeillionen.....	28
Llys stephan.....	35	Millyn gwyn .....	20
Llys tenewyn .....	52	Milwydd .....	54
Llys tryfal.....	17	Mintys .....	62, 63, 65
Llysuawg .....	32	Mochlys .....	58
Llys y wennol .....	15	Moch ysgallen.....	47
Llys yr ychen.....	21	Mordywydd.....	79
Llys ysgyfarnog .....	75, 80	Morfrwynen.....	88
Mabgoll.....	32	Morhesg .....	94
Madywydd .....	79	Mor Hoccys.....	24
Madwysg .....	14	Morlwyau .....	16
Mafonen .....	32	Moronyrn.....	39, 42
Mafon-llwyn.....	32	Murlwyn .....	76
Maglys .....	29	Mur Rhwyddlwyn.....	58



	PAGE.		PAGE.
Murwyll .....	18	Pren melyn .....	14
Mwccog .....	33	Pren ysgaw .....	43
Mwg y ddacae .....	15	Pren Yw .....	79
Mwsglys .....	38	Pumnaalen .....	33
Mwstardd .....	18	Purpur .....	37
Mwyarllwyn .....	33	Pwpleren .....	78
Mwyaren .....	33	Pwrs y bugail .....	17
Myncog .....	55	Pybyrllys llydanddail .....	16
Mynyglog .....	58	Pysen .....	29
Myrdd-ddail .....	35	Pysen y coed .....	31
Nyth aderyn .....	39	Redynen .....	103
Oestrwydden .....	77	Rhafnwydden .....	27
Ogfaenllwyn .....	34	Rhawn y march .....	102
Ogwydd .....	54	Rhedyn .....	103, 105
Olbraih dafadearawg .....	16	Rhedynach .....	103
Onen .....	56	Rhesinwydd .....	37
Onwydden .....	56	Rhonwellt .....	94
Orfungc .....	62	Rhosyn .....	34
Pabi .....	15	Rhosllwyn per .....	34
Pabi corniog melyn .....	15	Rhuddygl .....	16, 17
Pabyren .....	88	Rhwning-bren .....	34
Paladr trwydds .....	39	Rhwyddlwyn .....	58
Paladr hir .....	62	Rhwymyn .....	80
Palf y llew .....	32	Rhyfwydden .....	37
Pannof trithgoch .....	61	Rhyw'r muriau .....	106
Pawrwellt .....	99	Safn .....	60
Peffrwellt .....	94	Saethlys .....	85
Peisgwellt .....	100	Saethbenig .....	85
Pelanllys .....	102	Saets gwillt .....	63
Peledr .....	76	Sammwl .....	69
Penboth .....	64	Sampier .....	52, 70
Peneuraidd .....	13	Samylen .....	69
Penfelen .....	53	Sataen .....	77
Pengaled .....	50	Sawdl y crydd .....	71
Penlas .....	46, 50	Sebonllys meddygawl .....	21
Pennaur gwyr .....	70	Sel selyf .....	84
Penrudd .....	63	Seren .....	83
Pensoeg .....	76	Serenllys .....	52
Peradyl .....	48	Serenyn .....	83
Perchwerioyn .....	65	Sherardia glas .....	45
Perfaglwyafl .....	56	Sidan y waun .....	91
Perllys yr hel .....	40	Sifyen .....	33
Perth Eurddraen .....	36	Simmur y cor .....	32
Perthlys .....	73	Sircyn y melinydd .....	61
Piblys .....	18	Sirianen .....	31
Pidyn y gog .....	86	Sisby ber .....	41
Pig y Creyr .....	25	Suran .....	26, 73
Pig yr Aran .....	25	Swynyddlys .....	35
Pigyl meddygawl .....	67	Tafod y bwch .....	66
Pinwydden .....	79	Tafod y bythenad .....	67
Pisgwydden .....	24	Tafod yr edu canolig .....	22
Piswydden .....	26	Tafod y ci .....	86
Plucen felen .....	27	Tafod yr edu .....	22
Plu'r gweunydd .....	91	Tafod yr hudd .....	105
Poethflam .....	13	Tafod y llew .....	48
Porpin .....	36	Tatod y neidr .....	103
Pren awyr .....	38	Tafod yr wydd .....	55
Pren Bocccys .....	75	Tafod yr ych .....	67
Pren criafal .....	34	Tafolen .....	72, 73

	PAGE.		PAGE.
Taglys .....	57, 73	Trwyn y llo .....	60
Tagwydd .....	57	Trydo .....	32
Tagwyg bysen .....	30	Trython .....	72
Tanclys .....	54	Tryw .....	32
Tawddrudd .....	20	Twrged blewog .....	19
Tegeirian .....	80, 81	Uchelfawr .....	38
Tegwch meinwen .....	27	Uchelawg .....	38
Teircaill .....	81	Uchelwydd .....	38
Teilai .....	45	Wermod .....	54
Tethau'r gaseg .....	44	Wriscan .....	55
Tewbannog .....	61, 69	Wroith .....	54
Tinboeth .....	73	Y Besychlys .....	52
Tinllwyd .....	33	Y danol .....	52
Toddaidd melyn .....	68	Ydbysen .....	31
Toddaidd rudd .....	20	Ynoden las werdd .....	85
Torfagl .....	62	Y pren y crogodd Diawl y fam .....	26
Torllwydig .....	47	Ysbeinwydd .....	75
Tormaen tribys .....	37	Ysgallen .....	49
Tost frwynen .....	91	Ysgallen y meirchydd .....	46
Traitureaid y bugeilydd .....	70	Ysgawen .....	43
Tresgl y moch .....	33	Ysgawlwyn .....	43
Trewynyn .....	69	Ysgedd arfot .....	15
Triagl y cymro .....	63	Ysgello gwillt .....	46
Triaglog goch .....	45	Ysgol Fair .....	57
Trilliw .....	20	Ysgol Grist .....	57
Tripa-y-gwr-drwg .....	12	Ysgorpionllys .....	67
Troed yr aderyn .....	30	Ysgras .....	33
Troed yr asen .....	18	Ystrewlys .....	55
Troed y cyw clymmog .....	39	Yspardin y Marchog .....	14
Troed y dryw .....	32	Yspyddaden .....	34
Troed yr ebol .....	13	Yswinfri .....	53
Troed y gywen .....	36	Yswydden .....	56
Troed y llew .....	32	Yttag .....	73
Troellig .....	23	Ywen .....	79





